



Bullock, Bennett & Associates, LLC

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**COAL COMBUSTION RESIDUAL RULE
2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE
ACTION REPORT**

*A1 AREA LANDFILL
MARTIN LAKE STEAM ELECTRIC STATION
PANOLA COUNTY, TEXAS*

January 31, 2025

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ACRONYMS AND ABBREVIATIONS

ACM	Assessment of Corrective Measures
CCR	Coal Combustion Residuals
C.F.R.	Code of Federal Regulations
GWPS	Groundwater Protection Standard
MCL	Maximum Concentration Level
mg/L	Milligrams per Liter
MLSES	Martin Lake Steam Electric Station
MNA	Monitored Natural Attenuation
NA	Not Applicable
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
T.A.C.	Texas Administrative Code
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Luminant Generation Company LLC (Luminant) to satisfy the 2024 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the A1 Area Landfill (the “CCR unit”) at the Martin Lake Steam Electric Station (MLSES) in Panola County, Texas. The CCR unit and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2024 reporting period, the CCR unit was operating under an Assessment Monitoring Program as described in § 257.95. The Assessment Monitoring Program was established on July 16, 2018. Concentrations of Appendix IV constituents at statistically significant levels (SSLs) above groundwater protection standards (GWPSs) were identified in January 2019 for arsenic, barium, cobalt, and lithium at the A1 Area Landfill. An Assessment of Corrective Measures (ACM) was initiated on April 8, 2019 and was completed on September 5, 2019 in accordance with § 257.96 to address the Appendix IV SSLs. A public meeting was held on November 13, 2019, pursuant to § 257.96(e), to discuss the results of the ACM. A Remedy Selection Report (Golder 2022a) was completed in January 2022 in accordance with the requirements of § 257.97. MNA with source control measures was selected as the remedy to address the Appendix IV constituents observed at SSLs. A site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report.

Cobalt is the only Appendix IV constituent that has been observed at SSLs above the GWPS since 2019. During 2024, SSLs above GWPSs were observed at A1 Area Landfill for cobalt at wells BMW-20 and BMW-27.

1.0 INTRODUCTION

The CCR Rule (40 C.F.R. 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) was promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. TCEQ has adopted portions of the federal CCR rule at 30 T.A.C. Chapter 352 (Texas CCR Rule), and USEPA published its final approval of the Texas CCR rule on June 28, 2021. See 86 Fed. Reg. 33,892 (June 28, 2021). The Texas CCR Rule became effective on July 28, 2021, and it adopts and incorporates by reference the requirements for the annual groundwater monitoring report located at 40 C.F.R. § 257.90. See 30 T.A.C. § 352.901. It further adopts and incorporates by reference the Federal CCR Program requirements for detection and assessment monitoring in 30 T.A.C. § 352.941 and 30 T.A.C. § 352.951, respectively. Pursuant to 30 T.A.C. § 352.902, this report will be submitted to TCEQ for review no later than 30 days after the report has been placed in the facility's operating record. For existing CCR landfills and surface impoundments, the CCR Rule requires that the owner or operator prepare an annual groundwater monitoring and corrective action report to document the status of the groundwater monitoring and corrective action program for the CCR unit for the previous calendar year. Per § 257.90(e) of the CCR Rule, the report should contain the following information, to the extent available:

- (1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
- (2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
- (3) In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- (4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
- (5) Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

- (6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
- (i) At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;
 - (ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;
 - (iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):
 - (A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and
 - (B) Provide the date when the assessment monitoring program was initiated for the CCR unit.
 - (iv) If it was determined that there was a SSL above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:
 - (A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;
 - (B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;
 - (C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and
 - (D) Provide the date when the assessment of corrective measures was completed for the CCR unit.
 - (v) Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and
 - (vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The initial Detection Monitoring Program groundwater samples were collected from the A1 Area Landfill CCR monitoring well network in September 2017. The evaluation of those data was completed in 2018 using procedures described in the Statistical Analysis Plan (Golder 2022b) to identify statistically significant increases (SSIs) of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Detection Monitoring Program Summary

Sampling Completion Date	Parameters	SSIs	Assessment Monitoring Program Established
September 26, 2017	Appendix III	Yes	July 16, 2018

Alternate source evaluations were inconclusive for one or more of the SSIs. Consequently, an Assessment Monitoring Program was initiated and established for the A1 Area Landfill in July 2018 in accordance with § 257.94(e)(2). The initial Assessment Monitoring Program groundwater samples were collected in June 2018. Subsequent Assessment Monitoring Program sampling events have been conducted on a semi-annual basis, as required by the CCR Rule. The Assessment Monitoring Program sampling dates and parameters are summarized in the following table:

Assessment Monitoring Program Summary

Sampling Completion Date	Analytical Data Receipt Date	Parameters	Appendix IV Constituents with SSL(s)	Appendix IV SSL Determination Date	Corrective Measures Assessment Initiated	Corrective Measures Assessment Completed
June 12, 2018	July 21, 2018	Appendix III Appendix IV	NA	NA	NA	NA
September 14, 2018	October 12, 2018	Appendix III Appendix IV	As, Ba, Co, Li	January 7, 2019	April 8, 2019	September 5, 2019
May 15, 2019	June 18, 2019	Appendix III Appendix IV	Co	September 5, 2019	NA	NA
September 9, 2019	October 14, 2019	Appendix III Appendix IV	Co	January 8, 2020	NA	NA
May 22, 2020	June 24, 2020	Appendix III Appendix IV	Co	August 17, 2020	NA	NA
September 30, 2020	October 27, 2020	Appendix III Appendix IV	Co	December 7, 2020	NA	NA
June 15, 2021	July 19, 2021	Appendix III Appendix IV	Co	July 19, 2021	NA	NA
October 7, 2021	November 15, 2021	Appendix III Appendix IV	Co	January 10, 2022	NA	NA
May 26, 2022	July 13, 2022	Appendix III Appendix IV	Co	August 1, 2022	NA	NA
September 23, 2022	November 9, 2022	Appendix III Appendix IV	Co	December 24, 2022	NA	NA
May 24, 2023	June 30, 2023	Appendix III Appendix IV	Co	July 28, 2023	NA	NA
August 16, 2023	September 26, 2023	Appendix III Appendix IV	Co	December 11, 2023	NA	NA
June 13, 2024	July 11, 2024	Appendix III Appendix IV	Co	July 19, 2024	NA	NA
August 8, 2024	September 13, 2024	Appendix III Appendix IV	Co	November 11, 2024	NA	NA

Notes:

NA: Not Applicable

As documented in the Background Groundwater Monitoring and Statistical Analysis Summary Report (BBA, 2024), statistical background upper prediction limits (UPLs) and GWPSs were developed using statistical procedures that conform with the groundwater sampling and analysis requirements of 40 C.F.R. § 257.93 and the EPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (EPA, 2009). The statistical background prediction limits used to assess Appendix III data and the GWPSs used to assess Appendix IV data are summarized in Tables 1 and 2, respectively.

SSLs above GWPSs were initially identified for arsenic, barium, cobalt, and lithium in 2019. Notification of these SSLs was placed in the operating record on February 6, 2019, and was subsequently placed on the public website in accordance with § 257.107(d). An ACM was initiated on April 8, 2019 pursuant to § 257.95(g). A justification letter for a 60-day extension due to site-specific circumstances that delayed work on the ACM was certified on July 3, 2019 in accordance with § 257.96(a). A copy of the extension justification letter was provided in the 2019 Annual Groundwater Monitoring and Corrective Action Report. The ACM was completed in September 2019 (Golder 2019) for the parameters detected at SSLs above GWPSs (arsenic, barium, cobalt, and lithium), pursuant to § 257.96. A public meeting was held on November 13, 2019, pursuant to § 257.96(e), to discuss the results of the ACM. A Remedy Selection Report (Golder 2022a) was completed in January 2022 in accordance with the requirements of § 257.97. MNA with source control measures (capping) was selected as the remedy to address the Appendix IV constituents observed at SSLs. A site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report. Based on the results of the MNA feasibility study, the following was concluded regarding the Appendix IV constituents identified at SSLs:

- Physical and chemical attenuation of arsenic, barium, cobalt, and lithium is occurring at the site. Concentrations of these constituents in groundwater are stable or decreasing and the aquifer has adequate capacity to attenuate these constituents in a reasonable timeframe. Geochemical modeling indicates that attenuation will be efficient and stable in the long term. Therefore, MNA with source control measures is considered an effective corrective measure for the site.

Appendix III and Appendix IV groundwater sample data are summarized in Tables 3 and 4, respectively. Laboratory analytical reports for the groundwater samples collected in 2024 are provided in Appendix A. In accordance with the assessment monitoring program requirements in 40 C.F.R. § 257.95, Appendix IV constituent concentrations are used to evaluate whether an SSL above GWPSs has occurred at the site. The 95% lower confidence limit of the mean (LCL) is calculated for each detected Appendix IV constituent in a downgradient well using the current and previous sampling event concentrations in accordance with procedures described in the Statistical Analysis Plan for the site (Golder 2022) and the *Unified Guidance* (EPA, 2009). A statistically significant increase over the GWPS has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a downgradient well is greater than the applicable GWPS. The statistical data analysis for the current period is summarized in Appendix B.

Cobalt was the only Appendix IV parameter identified at an SSL above the GWPS during the 2024 assessment monitoring period.

3.0 KEY ACTIONS COMPLETED IN 2024

Assessment Monitoring Program groundwater monitoring events were completed in June and August 2024. The number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 3 (Appendix III parameters) and Table 4 (Appendix IV parameters). A map showing the CCR unit and monitoring wells is provided as Figure 1. No CCR wells were installed or decommissioned in 2024.

Water elevations measured in the CCR wells during the 2024 semi-annual groundwater monitoring events are summarized in Table 5 and the 2024 groundwater potentiometric surface maps are presented in Appendix C. The inferred direction and magnitude of groundwater flow during the 2024 monitoring events was generally from the northeast to the west, southwest, and southeast at about 9 feet per year, which is similar to previously observed conditions at the site.

As noted in Section 2.0, an ACM for the Appendix IV parameters identified at SSLs above GWPSs in 2018 (arsenic, barium, cobalt, and lithium) was completed in September 2019 to assess potential corrective measures alternatives. A Remedy Selection Report (Golder 2022b) was completed in January 2022 in accordance with the requirements of § 257.97. MNA with source control measures was selected as the remedy to address the Appendix IV constituents observed at SSLs. The MNA monitoring well network and MNA sampling and analysis procedures are the same as those used in the current Assessment Monitoring Program. As such, groundwater monitoring activities to satisfy MNA monitoring requirements are ongoing. The MNA groundwater monitoring program and source control measures that constitute the selected remedy have therefore been initiated and the requirement of § 257.98(a) for initiating remedial activities within 90 days of selecting a remedy has been met.

During 2024, SSLs above GWPSs were observed at the A1 Area Landfill for cobalt at wells BMW-20 and BMW-27. Notifications of the observed SSLs were submitted to the executive director via email as required under 30 TAC § 352.951(d) on July 30, 2024, for the first semi-annual sampling event and November 25, 2024, for the second semi-annual sampling event. SSLs above GWPS were not observed for any of the other Appendix IV constituents in 2024. A time series plot of cobalt concentrations in BMW-20 and BMW-27 is provided in Appendix D. The time series plot shows that cobalt concentrations have been stable or decreasing in BMW-

20 and BMW-27 since about 2019. Furthermore, cobalt concentrations in BMW-27 have been below the GWPS in all samples collected from 2019 onward. Cobalt concentrations have also been below the GWPS in all samples collected from well BMW-32, which was installed downgradient of BMW-20 and BMW-27 in 2019 as part of the ACM to delineate the cobalt SSLs in those wells. These data support the findings of the MNA feasibility study; specifically, that the source control and MNA remedy is effective at addressing the SSLs above GWPSs.

Per 40 C.F.R. § 257.98(c), the selected remedy will be considered complete when: (1) The owner or operator of the CCR unit demonstrates compliance with the GWPS established under 40 C.F.R. § 257.95(h) has been achieved at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under 40 C.F.R. § 257.91, (2) Compliance with the GWPS established under 40 C.F.R. § 257.95(h) has been achieved by demonstrating that concentrations of constituents listed in Appendix IV to this part have not exceeded the GWPSs for a period of three consecutive years using the statistical procedures and performance standards in 40 C.F.R. § 257.93(f) and (g), and (3) All actions required to complete the remedy have been satisfied.

The Assessment Monitoring Program will continue based on the SSLs of cobalt identified at the site in 2024.

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2024.

5.0 KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continue the Assessment Monitoring Program in accordance with applicable provisions of 40 C.F.R. § 257.95 and 30 T.A.C. § 352.951.

6.0 REFERENCES

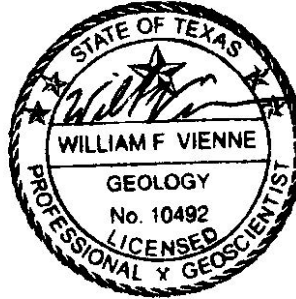
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SIGNATURE PAGE

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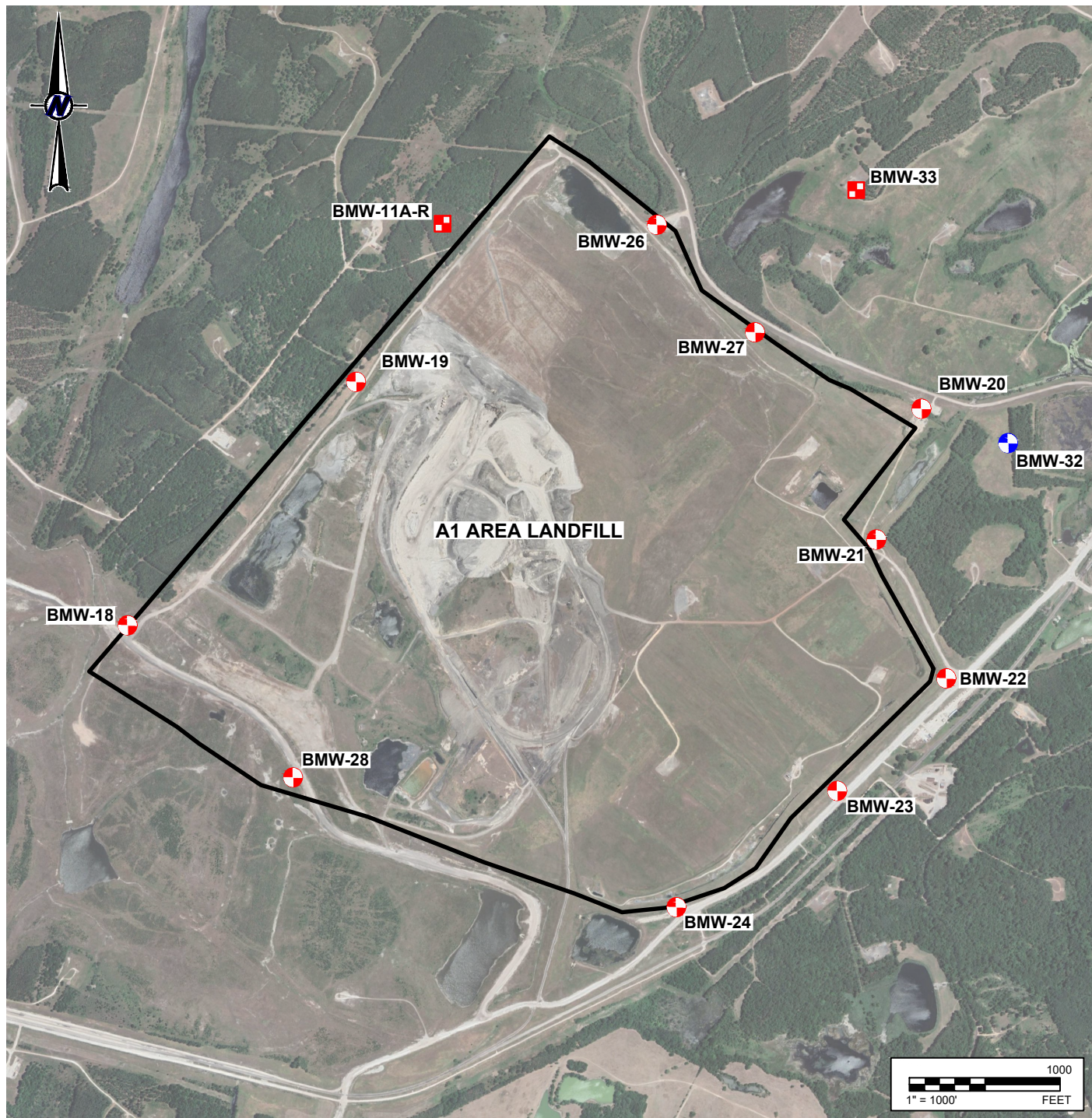


William Vienne, P.G.
Senior Hydrogeologist



01/31/2025

FIGURES



LEGEND



DOWNGRADIENT CCR MONITORING WELL



UPGRADIENT CCR MONITORING WELL



ASSESSMENT OF CORRECTIVE MEASURES DELINEATION MONITORING WELL

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATE JANUARY 2021

**LUMINANT
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS**

**A1 AREA LANDFILL
SITE PLAN**

PROJECT: 23643.03 BY: SLB DATE: 12/19/2023 CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

TABLES

Table 1
Statistical Background Values
MLSES A1 Area Landfill

Parameter	Statistical Background Value
Boron (mg/L)	0.55
Calcium (mg/L)	280
Chloride (mg/L)	36
Fluoride (mg/L)	0.40
field pH (s.u.)	5.8 7.6
Sulfate (mg/L)	1,100
Total Dissolved Solids (mg/L)	2,900

Table 2
Groundwater Protection Standards
MLSES A1 Area Landfill

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.016
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.012
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.10
Mercury (mg/L)	0.0020
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.050
Thallium (mg/L)	0.0020
Radium 226+228 (pCi/L)	11

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
Upgradient Wells								
BMW-11-AR	10/29/15	0.332	91.5	11.3	<0.100	6.97	243	923
	12/30/15	0.285	92.3	2.39	0.26 J	6.87	114	642
	02/25/16	0.44	136	18.8	0.123 J	6.52	382	1,450
	04/07/16	0.391	151	17.5	<0.100	6.34	334	1,290
	06/09/16	0.417	182	19.8	<0.100	6.63	603	1,700
	08/11/16	0.389	170	20.8	<0.100	6.68	682	1,790
	10/26/16	0.316	99.7	15.8	<0.100	6.85	495	1,590
	12/14/16	0.409	201	19.8	<0.100	6.65	665	1,970
	09/25/17	0.448	199	15.2	<0.100	6.97	561	1,620
	06/12/18	0.634	173	8.37	0.323 J	6.82	320	1,080
	09/14/18	0.455	175	19.7	0.353 J	5.86	538	1,720
	05/15/19	0.374	138	6.11	0.198 J	6.84	324	970
	09/04/19	0.368	149	6.41	0.170 J	6.82	356	1,090
	05/20/20	0.289	114	4.43	<0.100	6.89	266	907
	09/29/20	0.349	148	6.37	0.408	6.42	275	1,240
	06/14/21	0.32	143	5.36	0.208 J	6.73	330	903
	10/06/21	0.318	158	5.83	<0.100	6.77	334	978
	05/26/22	0.331	119	7.46	0.169 J	6.73	285	1060
	09/23/22	0.383	167	17.2	<0.100	6.43	458	1410
	05/23/23	0.42	103	18.6	<0.100	6.82	258	1010
	08/16/23	0.399	91.8	19.5	<0.100	6.69	234	995
	05/23/24	0.43	88.9	20.6	0.211 J	6.75	228	970
	08/07/24	0.410	91.3	19.6	<0.100	6.78	240	935
BMW-33	06/13/19	--	97.5	83.8	0.342 J	--	256	1,100
	09/09/19	0.269	95.8	79.5	0.145 J	--	232	1,040
	05/21/20	0.241	112	67.7	<0.100	6.76	202	1,020
	09/30/20	0.228	131	60.9	0.410	6.73	184	1,000
	06/15/21	0.208	118	66.4	0.235 J	6.52	210	980
	10/07/21	0.179	138	67.8	<0.100	6.57	188	1040
	05/26/22	0.183	112	58.1	0.147 J	6.52	168	1060
	09/23/22	0.195	132	73.6	<0.100	6.59	174	945
	05/23/23	0.195	128	61.7	0.149 J	6.96	163	965
	08/16/23	0.201	133	62.4	<0.100	6.72	149	1020
	06/13/24	0.219	49.1	4.82	<0.100	6.77	299	544
	08/08/24	0.171	129	46.0	<0.100	6.78	142	965
Downgradient Wells								
BMW-18	10/30/15	0.41	7.2	26.6	0.148 J	6.65	97	768
	12/30/15	0.322	346	7.14	0.101 J	6.77	1,570	2,470
	02/26/16	0.406	9.49	17.1	0.164 J	6.91	90	508
	04/07/16	0.423	7.08	16.3	0.117 J	6.52	87	489
	06/09/16	0.429	7.32	18.7	0.128 J	6.64	101	498
	08/11/16	0.415	7.02	18.5	<0.100	6.81	100	493
	10/26/16	0.45	6.55	18.1	0.158 J	6.67	94.3	534
	12/14/16	0.411	9.26	17.6	0.134 J	6.77	94.1	493
	09/25/17	0.437	6.49	16.9	0.128 J	6.87	87.2	476
	06/12/18	0.636	14.4	18.2	0.176 J	6.82	87.2	464
	09/14/18	0.423	6.06	18.6	0.201 J	5.70	81.3	476
	05/15/19	0.443	7.91	20	0.229 J	6.65	89.9	473
	09/04/19	0.435	7.72	19.2	0.203 J	6.51	91.8	478
	05/20/20	0.476	9.13	17.8	0.144	6.87	82.3	477
	09/30/20	0.447	6.62	19.0	0.387 J	6.78	81.1	469
	06/15/21	0.463	6.67	19.3	0.231 J	6.58	87.1	467
	10/07/21	0.388	6.26	20	0.477	6.53	86.4	467
	05/26/22	0.401	7.27	19.2	0.209 J	6.65	79.6	469
	09/23/22	0.432	7.23	21	0.205 J	6.72	86.4	469

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
BMW-18	05/24/23	0.435	8.34	19	0.237 J	6.83	84.6	474
	08/16/23	0.439	7.99	18.8	0.164	6.63	79.3	464
	06/13/24	0.447	8.89	17.4	0.172 J	6.88	86.7	480
	08/08/24	0.419	7.59	19.3	0.195 J	6.83	83.4	464
BMW-19	10/29/18	0.385	417	16.2	<0.100	6.77	2,070	4,060
	12/30/15	0.4	441	11.4	0.127 J	6.49	2,100	3,260
	02/25/16	0.458	504	8.4	<0.100	6.14	2,330	2,960
	04/07/16	0.424	480	8.46	<0.100	6.71	2,270	3,740
	06/09/16	0.444	489	8.04	<0.100	6.32	2,390	4,180
	08/11/16	0.419	458	8.26	<0.100	6.95	2,370	3,780
	10/26/16	0.417	443	8.26	<0.100	6.97	2,210	4,410
	12/14/16	0.427	481	7.2	<0.100	6.75	2220	3,660
	09/25/17	0.481	496	6.11	<0.100	6.95	2,360	3,670
	06/12/18	0.667	539	6.08	<0.100	6.92	2,080	3,660
	09/13/18	0.460	514	6.86	0.40	6.26	2,330	4,010
	05/15/19	0.474	388	4.66	0.189 J	6.88	1,760	3,090
	09/04/19	0.430	434	5.93	<0.1	6.74	2,010	3,320
	05/20/20	0.487	445	5.54	<0.100	6.74	2,020	3,470
	09/29/20	0.460	484	5.39	<0.100	6.63	1790	3,480
	06/15/21	0.45	391	5.72	<0.100	6.86	1770	2980
	06/15/21 DUP	0.496	399	6.03	<0.100	6.86	1600	2980
	10/07/21	0.424	466	4.72	<0.100	6.70	1720	3090
	05/26/22	0.426	432	6.2	<0.100	6.59	1900	3480
	09/23/22	0.466	497	8	<0.100	6.46	2270	3620
	05/23/23	0.482	449	6.84	<0.100	6.83	1570	2930
	08/16/23	0.482	421	6.78	<0.100	6.62	1570	3000
	06/13/24	0.218	107	2.12	<0.100	6.78	377	765
	08/07/24	0.421	301	2.68	<0.100	6.76	1110	2300
BMW-20	10/23/15	0.139 J	71.2	64.8	<0.100	6.28	223	804
	12/30/15	0.144	96	36.4	0.12 J	6.32	443	987
	02/25/16	0.202	157	30.7	<0.100	5.70	131	888
	04/07/16	0.0787	80	30	<0.100	6.22	219	600
	06/09/16	0.129	128	37.5	<0.100	6.24	557	1,220
	08/11/16	0.106	107	39.4	<0.100	6.86	602	1,310
	10/26/16	0.113	93.5	48.2	<0.100	6.93	801	1,610
	12/13/16	0.0687	62.8	42.8	<0.100	6.64	335	757
	09/26/17	0.0973	116	33.5	<0.100	6.73	472	986
	06/11/18	0.0912	149	35.9	0.144 J	6.67	654	1,160
	09/13/18	0.0773	91.1	48.8	<0.100	5.26	831	1,360
	05/15/19	0.979	146	426	0.418	6.71	474	2,030
	09/04/19	0.101	136	50.7	<0.100	6.74	1160	1,830
	05/20/20	0.179	162	35.8	<0.100	6.81	797	1,450
	09/29/20	0.111	143	46.3	<0.100	6.55	966	1,540
	06/14/21	0.13	187	42.7	0.109 J	6.84	1210	1810
	10/06/21	0.0998	151	47.2	<0.100	6.69	1060	1660
	05/26/22	0.0968	125	35.8	<0.100	6.89	455	1080
	09/22/22	0.102	132	46.5	<0.100	6.32	734	1220
	05/23/23	0.14	191	44.2	<0.100	6.88	734	1590
	08/15/23	0.106	155	48.1	<0.100	6.46	1010	1810
	06/13/24	0.178	103	49.2	<0.100	6.85	134	795
	08/07/24	0.147	181	45.1	0.124 J	6.91	791	1550

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
BMW-21	10/23/15	0.973	157	496	<0.100	7.28	484	2,510
	12/30/15	0.951	142	365	0.126 J	7.08	444	2,020
	02/25/16	1.01	148	393	<0.100	6.64	462	1,990
	04/07/16	0.99	158	373	<0.100	7.02	454	2,190
	06/09/16	1.17	155	415	<0.100	7.09	477	2,230
	08/11/16	1.04	143	425	<0.100	6.66	484	1,860
	10/26/16	1.14	145	399	<0.100	6.85	434	2,170
	12/13/16	0.993	149	426	<0.100	6.93	483	2,170
	09/26/17	1.02	138	364	<0.100	6.76	417	1,850
	06/11/18	1.01	168	402	0.233 J	6.75	457	1,990
	09/13/18	0.987	151	418	0.136 J	6.64	474	2,100
	05/15/19	0.994	147	428	0.366 J	6.92	474	1,980
	09/04/19	0.0409	152	426	<0.1	6.73	477	2,090
	05/20/20	1.07	166	416	<0.100	6.87	457	1,910
	09/29/20	1.00	161	415	<0.100	6.84	444	2,030
	06/14/21	1.02	156	442	<0.100	6.64	507	2130
	10/06/21	0.938	168	459	<0.100	6.77	503	2080
	05/26/22	1.03	170	407	<0.100	6.71	444	2110
	09/22/22	0.952	173	448	<0.100	6.33	496	2090
	05/23/23	1.03	180	425	<0.100	6.74	456	2140
	08/16/23	1.08	172	422	<0.100	6.63	445	2140
	05/23/24	1.08	179	437	<0.100	6.57	475	2130
	08/07/24	1.00	175	432	<0.100	6.51	445	2150
BMW-22	10/23/15	2.76	209	377	<0.100	6.86	927	2,720
	12/30/15	2.54	150	215	0.186 J	6.92	670	1,870
	02/25/16	3.18	209	295	<0.100	6.27	949	2,430
	04/07/16	3.34	202	256	<0.100	6.84	839	2,230
	06/08/16	3.53	193	279	<0.100	6.84	890	2,340
	08/11/16	3.18	198	311	<0.100	6.25	946	2,520
	10/26/16	3.38	183	241	<0.100	6.89	803	2,600
	12/13/16	3.45	191	281	<0.100	6.73	896	2,370
	09/26/17	3.53	209	270	<0.100	6.82	860	2,250
	06/11/18	3.49	219	280	0.312 J	6.85	883	2,180
	09/13/18	3.28	188	296	0.205 J	6.34	919	2,310
	05/15/19	3.39	198	311	0.351 J	6.68	967	2,260
	09/09/19	3.65	208	307	<0.100	6.58	960	2,420
	05/20/20	3.67	205	290	<0.100	6.69	906	2,230
	09/29/20	3.49	223	281	<0.100	6.75	855	2,280
	06/14/21	3.29	214	308	<0.100	6.42	998	2250
	10/06/21	3.19	222	316	<0.100	6.67	966	2310
	05/26/22	3.21	218	273	<0.100	6.59	843	2320
	09/22/22	3.25	225	312	<0.100	6.54	932	2280
	05/23/23	3.27	232	291	<0.100	6.86	879	2380
	08/15/23	3.44	223	286	<0.100	6.63	844	2390
	05/23/24	3.35	234	290	0.126 J	6.85	890	2360
	08/07/24	3.31	234	292	<0.100	6.76	859	2270

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
BMW-23	10/23/15	1.19	102	287	<0.100	6.84	577	1,980
	12/30/15	1.25	95.2	214	0.122 J	6.76	529	1,500
	02/25/16	1.31	97.7	225	<0.100	6.16	527	1,520
	04/07/16	1.22	95.1	221	<0.100	6.63	503	1,510
	06/08/16	1.31	102	254	<0.100	6.71	558	1,720
	08/11/16	1.28	90.4	242	<0.100	6.15	539	1,430
	10/26/16	1.22	86.8	219	<0.100	6.85	467	1,700
	12/13/16	1.25	91.8	237	<0.100	6.63	510	1,870
	09/26/17	1.46	99.6	223	<0.100	6.65	482	1,550
	06/12/18	1.49	104	236	0.204 J	6.72	490	1,530
	09/13/18	1.34	91.7	236	0.190 J	6.25	482	1,560
	05/15/19	1.31	89.9	240	<0.100	6.84	613	1,640
	09/09/19	1.47	98.9	257	<0.100	6.65	503	1,680
	05/20/20	1.63	105	256	<0.100	6.63	494	1,580
	09/29/20	1.42	102	238	0.302 J	6.93	443	1,590
	06/14/21	1.67	110	283	<0.100	6.75	565	1700
	10/06/21	1.44	100	279	<0.100	6.64	517	1670
	05/26/22	1.67	107	251	<0.100	6.67	482	1700
	09/22/22	1.63	109	282	<0.100	6.39	522	1670
	05/23/23	1.81	118	271	<0.100	6.88	485	1750
	08/15/23	1.82	104	251	<0.100	6.55	459	1660
	05/23/24	2.06	117	280	<0.100	6.58	502	1740
	08/07/24	1.93	112	258	<0.100	6.69	464	1550
BMW-24	10/23/15	0.144 J	61.6	633	0.247 J	7.14	45	1,510
	12/30/15	0.347	58.8	404	0.391 J	7.07	125	1,210
	02/25/16	0.431	61.6	332	0.236 J	5.80	184	1,210
	04/07/16	0.532	63.4	224	0.109 J	7.07	240	1,100
	06/08/16	0.612	60.1	201	0.147 J	7.06	259	984
	08/11/16	0.248	58.5	481	0.225 J	5.84	97.8	1,150
	10/26/16	0.225	59.2	518	0.305 J	6.78	34.2	1,490
	12/13/16	0.225	62.5	518	0.3 J	6.78	33	1,480
	09/26/17	0.656	66.8	229	<0.100	6.82	242	940
	06/11/18	0.469	70.6	336	0.466	6.76	117	970
	09/13/18	0.197	59.5	488	0.769	6.45	40	1,090
	05/15/19	0.601	57.9	169	0.219 J	6.78	280	881
	09/09/19	0.247	56.4	501	0.534 J	6.65	16.4	985
	05/20/20	0.758	67.8	175	0.129 J	6.72	254	907
	09/29/20	0.205	58.8	482	0.725	6.57	4.48	1,000
	06/14/21	0.661	65.4	165	0.251 J	6.68	276	848
	10/06/21	0.212	57.9	474	0.312 J	6.58	6.72	1020
	05/26/22	0.618	80.3	191	0.160 J	6.68	255	952
	09/22/22	0.198	55.9	521	0.483	6.22	<1.00	1210
	05/23/23	0.68	80.5	179	0.119 J	6.81	257	917
	08/15/23	0.216	68.8	477	0.0553	6.47	8.52	1160
	05/23/24	0.694	70.9	172	0.104 J	6.62	249	970
	08/07/24	0.415	74.8	342	0.358 J	6.57	76.3	960

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
BMW-26	09/13/16	0.457	234	97.8	<0.100	6.51	671	2,120
	10/26/16	0.127	44.3	16.2	<0.100	6.87	140	414
	12/14/16	0.251	130	152	0.344 J	6.96	1210	2,050
	01/23/17	0.478	224	126	<0.100	6.33	669	1,950
	02/23/17	0.0683	52	23.9	0.106 J	6.22	20.4	209
	03/24/17	0.44	215	112	<0.100	6.68	610	1,690
	04/24/17	0.495	218	111	<0.100	6.37	576	2,210
	05/25/17	0.613	178	115	<0.100	6.82	613	2,110
	06/29/17	0.507	233	111	<0.100	-- *	604	1,700
	09/25/17	0.514	71	112	<0.100	6.95	606	1,510
	06/12/18	0.726	96.5	120	<0.100	6.61	633	1,550
	09/13/18	0.474	230	125	<0.100	5.32	671	2,020
	05/15/19	0.449	200	135	<0.100	6.90	706	1,930
	09/04/19	0.473	262	140	<0.100	6.78	753	2,170
	05/20/20	0.547	252	131	<0.100	6.77	701	1,980
	09/29/20	0.522	265	130	<0.100	6.74	703	2,140
	06/14/21	0.488	235	140	<0.100	6.61	780	2040
	10/06/21	0.44	265	142	<0.100	6.78	769	2230
	05/26/22	0.502	187	127	<0.100	6.79	674	1890
	09/22/22	0.508	115	147	<0.100	6.41	726	1680
	05/23/23	0.484	225	132	<0.100	6.85	727	1990
	08/16/23	0.536	63	132	<0.100	6.81	669	1700
	05/23/24	0.515	182	130	<0.100	6.65	681	1890
	5/23/24 DUP	0.519	210	133	<0.100	6.65	695	1920
	08/07/24	0.483	74.1	133	<0.100	6.78	666	1430
BMW-27	09/13/16	0.486	160	133	0.668	5.87	1,150	2,750
	10/26/16	0.548	196	102	<0.100	6.73	700	2,020
	12/14/16	0.529	211	101	<0.100	6.90	674	1,810
	01/23/17	0.393	152	143	0.573	5.62	1,280	2,260
	02/23/17	0.0832	52.4	24	0.252 J	6.40	20.6	239
	03/24/17	0.304	120	132	0.738	6.35	1,190	2,100
	04/24/17	0.34	132	130	0.663	6.22	1,150	2,290
	05/25/17	0.331	122	124	1.61	6.67	1,150	2,320
	06/29/17	0.39	144	129	0.717	-- *	1,180	2,080
	09/25/17	0.336	128	126	0.254 J	6.89	1,160	2,110
	06/12/18	0.478	96.1	98.4	<0.100	6.87	522	1,420
	09/13/18	0.398	143	132	0.750	5.60	1,230	2,380
	05/15/19	0.46	190	129	<0.100	6.72	674	1,840
	09/04/19	0.463	257	141	<0.100	6.95	755	2,130
	05/20/20	0.46	213	108	<0.100	6.56	579	1,670
	09/29/20	0.464	268	134	<0.100	6.79	704	2,130
	06/14/21	0.351	177	107	<0.100	6.76	550	1490
	10/06/21	0.41	231	125	<0.100	6.52	666	1920
	05/26/22	0.343	93.7	66	<0.100	6.79	360	1040
	09/22/22	0.348	79.3	121	<0.100	6.59	578	1340
	05/23/23	0.374	170	108	<0.100	6.86	521	1530
	08/16/23	0.49	39.5	132	<0.100	6.79	673	1520
	05/23/24	0.493	183	110	<0.100	6.60	606	1740
	08/07/24	0.388	86.0	113	<0.100	6.57	556	1300

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
BMW-28	12/14/16	1.22	234	111	<0.100	6.87	1280	2,360
	01/23/17	1.18	221	122	0.104 J	6.85	1,370	2,810
	02/23/17	0.0776	53.3	24	0.11 J	6.43	20.3	203
	03/24/17	1.14	242	121	<0.100	6.36	1,350	2,580
	04/24/17	1.16	266	121	0.19 J	6.57	1,330	2,980
	05/25/17	1.23	255	130	<0.100	6.70	1,410	3,180
	06/29/17	1.21	269	130	0.137 J	6.98	1,450	2,950
	08/01/17	1.17	260	132	<0.100	--	1,460	2,780
	09/25/17	1.35 J	262	130	<0.100	6.85	1,430	3,060
	06/12/18	1.41	262	139	0.529	6.92	1,470	3,100
	09/13/18	1.35	243	143	0.445	5.71	1,420	3,180
	05/15/19	1.01	249	133	0.496	6.77	1,820	3,610
	09/04/19	1.22	277	137	<0.1	6.77	1,720	3,470
	05/20/20	1.29	284	137	<0.100	6.86	1520	3,270
	09/30/20	0.612	149	51.1	0.229 J	6.82	1030	2,100
	06/14/21	0.0878	15.5	38.4	<0.100	6.77	443	871
	10/07/21	0.104	19.1	19.2	0.290 J	6.78	185	402
	10/7/21 DUP	0.0993	19.4	12.8	<0.100	6.78	71.1	175
	05/26/22	0.134	25.4	27.5	0.119 J	6.92	833	1730
	09/23/22	0.168	34.8	11.1	<0.100	6.31	54.3	116
	05/23/23	0.560	184	10.1	0.163 J	6.84	1010	1820
	5/23/23 DUP	0.571	184	10.2	0.167 J	6.84	1040	1890
	08/16/23	0.634	182	10.2	<0.100	6.73	928	1700
	8/17/23 DUP	0.588	183	10.1	<0.100	6.73	928	1750
	06/13/24	0.219	49.1	4.82	<0.100	6.59	299	544
	08/08/24	0.131	25.7	3.34	<0.100	6.52	98.2	216
	8/8/2024 DUP	0.124	25.0	3.26	<0.100	6.52	97.7	221

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units.
2. J - concentration is below method quantitation limit; result is an estimate.
3. --: value not available due to pH meter malfunction during sampling.

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Comb.^
BMW-11-AR	10/29/15	<0.0008	0.0116	0.0659	<0.0003	<0.0003	<0.002	0.0124	<0.1	0.000391 J	0.0594	<0.00008	0.00496 J	<0.002	<0.0005	1.60	4.75	6.35
	12/30/15	<0.0008	0.00362 J	0.0433	<0.0003	<0.0003	<0.002	<0.003	0.26 J	0.000362 J	0.0589	<0.00008	0.00384 J	<0.002	<0.0005	1.66	3.19	4.85
	02/25/16	<0.0008	0.00608	0.0724	<0.0003	<0.0003	<0.002	0.00486 J	0.123 J	<0.0003	0.0276	<0.00008	0.00597	<0.002	<0.0005	2.43	3.80	6.23
	04/07/16	<0.0008	0.00614	0.0929	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0195	<0.00008	0.00444 J	<0.002	<0.0005	0.885	1.48	2.37
	06/09/16	<0.0008	0.00532	0.0891	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0187	<0.00008	0.00355 J	<0.002	<0.0005	0.47	<0.674	1.14
	08/11/16	<0.0008	0.00271 J	0.0772	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0147	<0.00008	0.00346 J	<0.002	<0.0005	0.810	2.42	3.23
	10/26/16	<0.0008	<0.002	0.0429	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0508	<0.00008	0.00363 J	<0.002	<0.0005	0.631	0.922	1.55
	12/14/16	<0.0008	0.0061	0.074	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.00347	0.0139	<0.00008	0.00303 J	<0.002	<0.0005	<0.821	<1.73	<2.551
	06/12/18	<0.0008	0.00444 J	0.0692	<0.0003	<0.0003	0.00295 J	<0.003	0.323 J	0.0017	0.0686	<0.00008	0.00340 J	<0.002	<0.0005	0.996	1.7	2.696
	09/14/18	--	0.0056	0.0735	--	--	<0.002	<0.003	0.353 J	0.00147	0.0196	--	0.00299 J	--	--	1.52	1.11	2.63
	05/15/19	<0.0008	0.00208 J	0.0399	<0.0003	<0.0003	<0.002	<0.003	0.198 J	<0.0003	0.0404	<0.00008	<0.002	<0.002	<0.0005	0.83	4.89	5.72
	09/04/19	--	<0.2	0.0393	--	--	--	<0.003	0.170 J	--	0.0411	--	<0.002	--	--	0.382	0.317	0.699
	05/20/20	<0.0008	0.00479 J	0.0439	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0348	<0.00008	<0.00200	<0.002	<0.0005	0.289	1.54	1.83
	09/29/20	--	0.0102	0.0517	<0.0003	<0.0003	<0.002	<0.003	0.408	<0.0003	0.0337	--	--	<0.002	--	0.209	1.59	1.8
	06/14/21	<0.0008	0.0029 J	0.0565	<0.0003	<0.0003	<0.002	<0.003	0.208 J	0.00132	0.032	<0.00008	<0.002	<0.002	<0.0005	0.434	0.712	1.15
	10/06/21	<0.0008	<0.002	0.0511	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0331	<0.00008	0.00212 J	<0.002	<0.0005	0.334	1.34	1.68
	05/26/22	<0.0008	0.00278 J	0.048	<0.0003	<0.0003	<0.002	<0.003	0.169 J	<0.0003	0.0205	<0.00008	0.00214 J	<0.002	<0.0005	0.329	1.73	2.06
	09/23/22	<0.0008	0.00715	0.0742	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0238	<0.00008	0.00275 J	<0.002	<0.0005	0.683	1.59	2.27
	05/23/23	<0.000800	0.00293 J	0.0633	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0343	<0.0000800	0.00224 J	<0.00200	<0.000500	0.216 J	1.62	1.84
	08/16/23	<0.000800	<0.00200	0.0607	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0342	<0.0000800	0.00223 J	<0.00200	<0.000500	0.68	1.91	2.59
	05/23/24	<0.000800	0.00381 J	0.0609	<0.000300	<0.000300	<0.00200	<0.00300	0.211 J	<0.000300	0.0379	<0.0000800	0.00229 J	<0.00200	<0.000500	0.504	0.93	1.43
	08/07/24	<0.000800	<0.00200	0.0618	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0389	<0.0000800	0.00223 J	<0.00200	<0.000500	0.291	0.703	0.994
BMW-33	06/13/19	--	<0.002	--	--	--	--	0.0176	0.342 J	--	0.0206	--	--	--	--	--	--	--
	09/09/19	--	<0.002	0.285	--	--	--	0.0122	0.145 J	--	0.0177	--	0.00325 J	NA	NA	0.738	<0.809	0.738
	05/20/20	0.00102 J	<0.002	0.203	<0.0003	<0.0003	<0.002	0.0065	<0.1	<0.0003	0.0145	<0.00008	0.00207 J	<0.002	<0.0005	0.499	0.394	0.893
	09/30/20	--	<0.002	0.166	<0.0003	<0.0003	<0.002	0.00826	0.410	<0.0003	0.0135	--	--	<0.002	--	0.237	0.419	0.656
	06/15/21	<0.0008	<0.002	0.137	<0.0003	<0.0003	<0.002	0.0113	0.235 J	<0.0003	0.0124	<0.00008	<0.002	<0.002	<0.0005	0.190 J	0.597 J	0.786 J
	10/07/21	<0.0008	0.00247 J	0.130	<0.0003	<0.0003	<0.002	0.0115	<0.1	<0.0003	0.0126	<0.00008	<0.002	<0.002	<0.0005	0.522	1.30	1.82
	05/27/22	<0.0008	<0.002	0.112	<0.0003	<0.0003	<0.002	0.00435 J	0.147 J	<0.0003	0.0121	<0.00008	<0.002	<0.002	<0.0005	0.351	0.836	1.19
	09/23/22	<0.0008	<0.002	0.112	<0.0003	<0.0003	<0.002	0.00702	<0.100	<0.0003	0.0136	<0.00008	<0.002	<0.002	<0.0005	0.263	0.669	0.406
	05/23/23	<0.000800	<0.00200	0.109	<0.000300	<0.000300	<0.00200	0.00504	0.149 J	<0.000300	0.013	<0.0000800	<0.00200	<0.00200	<0.000500	0.231	<1.02	0.515 J
	08/16/23	<0.000800	<0.00200	0.103	<0.000300	<0.000300	<0.00200	0.00394	<0.100	<0.000300	0.0131	<0.0000800	<0.00200	<0.00200	<0.000500	0.299 J	1.19	1.49
	06/13/24	<0.000800	<0.00200	0.0759	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0119	<0.0000800	<0.00200	<0.00200	<0.000500	0.208	<0.449	0.324 J
	08/08/24	<0.000800	<0.00200	0.0961	<0.000300	<0.000300	<0.00200	0.00459 J	<0.100	<0.000300	0.0137	<0.0000800	<0.00200	<0.00200	<0.000500	0.226	0.526	0.753

**TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL**

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Ti	Ra 226	Ra 228	Ra 226/228 Comb.^
Downgradient Wells																		
BMW-18	10/30/15	<0.0008	<0.002	0.0401	<0.0003	<0.0003	0.00944	<0.003	0.148 J	<0.0003	0.14	<0.00008	<0.002	<0.002	<0.0005	0.526	<1.51	2.04
	12/30/15	<0.0008	<0.002	0.0168	<0.0003	<0.0003	<0.002	0.0129	0.101 J	<0.0003	0.0415	<0.00008	<0.002	<0.002	<0.0005	<0.405	<2.04	<2.445
	02/26/16	<0.0008	<0.002	0.0446	<0.0003	<0.0003	0.00214 J	<0.003	0.164 J	<0.0003	0.0156	<0.00008	<0.002	<0.002	<0.0005	<0.406	<1.9	<2.306
	04/07/16	<0.0008	<0.002	0.0306	<0.0003	<0.0003	<0.002	<0.003	0.117 J	<0.0003	0.0171	<0.00008	<0.002	<0.002	<0.0005	<0.109	<1.00	<1.109
	06/09/16	<0.0008	<0.002	0.0283	<0.0003	<0.0003	<0.002	<0.003	0.128 J	<0.0003	0.0152	<0.00008	<0.002	<0.002	<0.0005	<0.143	0.857	1.00
	08/11/16	<0.0008	<0.002	0.0291	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0147	<0.00008	<0.002	<0.002	<0.0005	<0.22	<1.07	<1.29
	10/26/16	<0.0008	<0.002	0.029	<0.0003	<0.0003	<0.002	<0.003	0.158 J	<0.0003	0.0156	<0.00008	<0.002	<0.002	<0.0005	<0.132	<0.534	<0.666
	12/14/16	<0.0008	<0.002	0.0384	<0.0003	<0.0003	<0.002	<0.003	0.134 J	<0.0003	0.0158	<0.00008	<0.002	<0.002	<0.0005	0.140	<1.99	2.13
	06/12/18	<0.0008	<0.002	0.0412	<0.0003	<0.0003	<0.002	<0.003	0.176 J	0.0013	0.0185	<0.00008	<0.002	<0.002	<0.0005	0.232	0.706	0.938
	09/14/18	--	<0.002	0.0277	--	--	<0.002	<0.003	0.201 J	<0.0003	0.0165	--	<0.002	--	--	<0.509	<0.589	<1.098
	05/15/19	<0.0008	<0.002	0.0362	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.016	<0.00008	<0.002	<0.002	<0.0005	<0.264	3.95	4.214
	09/04/19	--	<0.002	0.0337	--	--	--	<0.003	0.203 J	--	0.0128	--	<0.002	--	--	0.304	1.48	1.79
	05/20/20	<0.0008	<0.002	0.0431	<0.0003	<0.0003	<0.002	<0.003	0.144 J	<0.0003	0.0136	<0.00008	<0.002	<0.002	<0.0005	0.555	1.21	1.76
	09/30/20	--	<0.002	0.0315	<0.0003	<0.0003	<0.002	<0.003	0.387 J	<0.0003	0.0193	--	--	<0.002	--	0.0836	<0.927	0.0836
	06/15/21	<0.0008	<0.002	0.0306	<0.0003	<0.0003	<0.002	<0.003	0.231 J	<0.0003	0.0127	<0.00008	<0.002	<0.002	<0.0005	<0.282	<0.645	0.000
	10/07/21	<0.0008	<0.002	0.0295	<0.0003	<0.0003	<0.002	<0.003	0.477	<0.0003	0.0159	<0.00008	<0.002	<0.002	<0.0005	0.155 J	0.0602	0.215
	05/26/22	<0.0008	<0.002	0.0334	<0.0003	<0.0003	<0.002	<0.003	0.209 J	<0.0003	0.0152	<0.00008	<0.002	<0.002	<0.0005	0.155 J	<0.207	0.430 J
	09/23/22	<0.000800	<0.00200	0.0331	<0.000300	<0.000300	<0.00200	<0.00300	0.205 J	<0.000300	0.0153	<0.0000800	<0.00200	<0.00200	<0.000500	0.212 J	<0.207	0.261 J
	05/24/23	<0.000800	<0.00200	0.0343	<0.000300	<0.000300	<0.00200	<0.00300	0.237 J	<0.000300	0.0128	<0.0000800	<0.00200	<0.00200	<0.000500	0.703	1.02	1.72
	08/16/23	<0.000800	<0.00200	0.0346	<0.000300	<0.000300	<0.00200	<0.00300	0.164 J	<0.000300	0.0122	<0.0000800	<0.00200	<0.00200	<0.000500	0.127 J	0.444 J	0.571 J
	06/13/24	<0.000800	<0.00200	0.0329	<0.000300	<0.000300	<0.00200	<0.00300	0.172 J	<0.000300	0.0124	<0.0000800	<0.00200	<0.00200	<0.000500	0.422	<0.0596	0.481 J
	08/08/24	<0.000800	<0.00200	0.0313	<0.000300	<0.000300	<0.00200	<0.00300	0.195 J	<0.000300	0.0141	<0.0000200	<0.00200	<0.00200	<0.000500	0.804	0.316 J	1.12
BMW-19	10/29/18	<0.0008	<0.002	0.0231	<0.0003	<0.0003	<0.002	0.0161	<0.1	<0.0003	0.0545	<0.00008	<0.002	<0.002	<0.0005	0.395	<1.56	1.96
	12/30/15	<0.0008	<0.002	0.0222	<0.0003	<0.0003	<0.002	0.0166	0.127 J	<0.0003	0.0506	<0.00008	<0.002	<0.002	<0.0005	0.598	<2.89	3.49
	02/25/16	<0.0008	0.00235 J	0.0169	<0.0003	<0.0003	<0.002	0.0149	<0.1	<0.0003	0.0711	<0.00008	<0.002	<0.002	<0.0005	0.571	1.94	2.51
	04/07/16	<0.0008	<0.002	0.0178	<0.0003	<0.0003	<0.002	0.0137	<0.1	<0.0003	0.0591	<0.00008	<0.002	<0.002	<0.0005	<0.185	<0.715	<0.9
	06/09/16	<0.0008	<0.002	0.0158	<0.0003	<0.0003	<0.002	0.0141	<0.1	<0.0003	0.0644	<0.00008	<0.002	<0.002	<0.0005	<0.142	1.98	2.12
	08/11/16	<0.0008	0.00711	0.0158	<0.0003	<0.0003	<0.002	0.0128	<0.1	<0.0003	0.0568	<0.00008	<0.002	<0.002	<0.0005	0.927	<0.812	1.74
	10/26/16	<0.0008	<0.002	0.0144	<0.0003	<0.0003	<0.002	0.0104	<0.1	<0.0003	0.0495	<0.00008	<0.002	<0.002	<0.0005	<0.152	<0.48	<0.632
	12/14/16	<0.0008	0.00369 J	0.0171	<0.0003	<0.0003	<0.002	0.0125	<0.1	<0.0003	0.0584	<0.00008	<0.002	<0.002	<0.0005	0.309	0.827	1.14
	06/12/18	<0.0008	0.0428	0.0243	<0.0003	<0.0003	0.00267	0.0115	<0.1	0.00183	0.0734	<0.00008	<0.002	<0.002	<0.0005	<0.395	1.17	1.565
	09/13/18	--	0.00491 J	0.0132	--	--	<0.002	0.0125	0.404 J	<0.0003	0.0845	--	<0.002	--	--	<0.376	1.46	1.836
	05/15/19	<0.0008	<0.002	0.0104	<0.0003	<0.0003	<0.002	<0.003	0.189 J	<0.0003	0.0647	<0.00008	<0.002	<0.002	<0.0005	0.487	4.66	5.147
	09/04/19	--	<0.002	0.0117	--	--	--	<0.003	<0.1	--	0.0694	--	<0.002	--	--	<0.267	0.563	0.563
	05/20/20	<0.0008	<0.002	0.0109	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0783	<0.00008	0.00231 J	<0.002	<0.0005	0.0651	0.127	0.192
	09/29/20	--	<0.002	0.0137	<0.0003	<0.0003	<0.002	0.0187	<0.1	<0.0003	0.0742	--	--	<0.00200	--	<0.312	1.02	1.020
	06/15/21	<0.0008	<0.002	0.0149	<0.0003	<0.0003	<0.002	0.0083	<0.1	<0.0003	0.0689	<0.00008	<0.002	<0.002	<0.0005	<0.195	0.0156	0.0156
	6/15/21 DUP	<0.0008	0.00288 J	0.015	<0.0003	<0.0003	<0.002	0.00831	<0.1	<0.0003	0.0686	<0.00008	<0.002	<0.002	<0.0005	0.175 J	1.38	1.55
	10/07/21	<0.0008	0.00341 J	0.0151	<0.0003	<0.0003	<0.002	0.0117	<0.1	<0.0003	0.0727	<0.00008	<0.002	<0.002	<0.0005	0.229 J	1.51	1.74
	05/26/22	<0.0008	<0.002	0.0122	<0.0003	<0.0003	<0.002	0.00355 J	<0.1	<0.0003	0.0663	<0.00008	<0.002	<0.002	<0.0005	0.326	0.557 J	0.882
	09/23/22	<0.000800	0.00312 J	0.0122	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.085	<0.0000800	<0.00200	<0.00200	<0.000500	0.104 J	0.555	0.659
	05/23/23	<0.000800	<0.00200	0.0118	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0776	<0.0000800	<0.00200	<0.00200	<0.000500	0.888	<0.626	1.05 J
	08/16/23	<0.000800	0.00217 J	0.0115	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.08	<0.0000800	<0.00200	<0.00200	<0.000500	<0.238	0.502 J	0.518 J
	06/13/24	<0.000800	<0.00200	0.0109	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0252	<0.0000800	<0.00200	<0.00200	<0.000500	<0.364	<0.531	<0.644
	08/07/24	<0.000800	<0.00200	0.0195	<0.000300	<0.000300	<0.00200	0.00628	<0.100	<0.000300	0.0661	<0.0000800	<0.00200	<0.00200	<0.000500	0.289	0.952	1.24

**TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL**

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Ti	Ra 226	Ra 228	Ra 226/228 Comb.^
BMW-20	10/23/15	<0.0008	0.00236 J	0.0778	<0.0003	<0.0003	<0.002	0.0256	<0.1	0.000501 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.463	<1.89	2.35
	12/30/15	<0.0008	0.00344 J	0.0777	<0.0003	<0.0003	<0.002	0.051	0.12 J	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.816	<2.41	3.23
	02/25/16	<0.0008	0.00474 J	0.0989	<0.0003	<0.0003	<0.002	0.022	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.61	2.85	3.46
	04/07/16	<0.0008	0.00411 J	0.0912	<0.0003	<0.0003	<0.002	0.0276	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.221	<1.08	1.30
	06/09/16	<0.0008	0.0103	0.0776	<0.0003	<0.0003	<0.002	0.054	<0.1	0.000696 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.51	<0.716	1.23
	08/11/16	<0.0008	<0.002	0.0637	<0.0003	<0.0003	<0.002	0.0513	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.322	1.40	1.72
	10/26/16	<0.0008	0.00444 J	0.0421	<0.0003	<0.0003	<0.002	0.0786	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.347	0.848	1.20
	12/13/16	<0.0008	0.00483 J	0.0377	<0.0003	<0.0003	<0.002	0.0451	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.246	1.15	1.40
	06/11/18	<0.0008	0.00473 J	0.0515	<0.0003	<0.0003	<0.002	0.0681	0.144 J	0.000476	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.74	0.865	1.605
	09/13/18	--	0.00473 J	0.0258	--	--	<0.002	0.0645	<0.100	0.000368 J	<0.005	--	<0.002	--	--	0.519	0.711	1.23
	05/15/19	<0.0008	0.00541	0.0412	<0.0003	<0.0003	<0.002	0.003	0.418	<0.0003	0.0615	<0.00008	<0.002	<0.002	<0.0005	1.18	0.657	1.837
	09/04/19	--	0.00768	0.0261	--	--	--	0.108	<0.1	--	<0.005	--	<0.002	--	--	0.0996	1.62	1.72
	05/20/20	<0.0008	0.0126	0.0494	<0.0003	<0.0003	<0.002	0.0912	<0.1	0.000956 J	<0.005	<0.00008	<0.002	0.0044 J	<0.0005	0.5	2.15	2.65
	09/29/20	--	0.00837	0.0292	<0.0003	<0.0003	<0.002	0.101	<0.1	0.00159	0.0742	--	--	0.00204 J	--	0.152	0.548	0.7
	06/14/21	<0.0008	0.00234 J	0.0431	<0.0003	<0.0003	<0.002	0.0788	0.109 J	0.000323 J	0.00778 J	<0.00008	<0.002	<0.002	<0.0005	0.500	2.81	3.31
	10/06/21	<0.0008	0.00439 J	0.0273	<0.0003	<0.0003	<0.002	0.0963	<0.1	0.000947 J	0.00549 J	<0.00008	<0.002	<0.002	<0.0005	0.401	2.18	2.58
	05/26/22	<0.0008	0.00413 J	0.0523	<0.0003	<0.0003	<0.002	0.0487	<0.1	0.000304 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.379	1.05	1.41
	09/22/22	<0.000800	0.00662	0.0364	<0.000300	<0.000300	<0.00200	0.0746	<0.100	0.000940 J	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.258 J	0.400 J	0.658
	05/23/23	<0.000800	0.0073	0.0507	<0.000300	<0.000300	<0.00200	0.0756	<0.100	0.000611	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.346	2.2	2.54
	08/15/23	<0.000800	0.00888	0.0304	<0.000300	<0.000300	<0.00200	0.108	<0.100	0.000961 J	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.455	1.05	1.50
	06/13/24	<0.000800	<0.00200	0.0828	<0.000300	<0.000300	<0.00200	0.00667	<0.100	<0.000300	0.0101	<0.0000800	<0.00200	<0.00200	<0.000500	0.276 J	<0.510	0.276 J
	08/07/24	<0.000800	0.0083	0.0413	<0.000300	<0.000300	<0.00200	0.0612	0.124 J	0.000679 J	0.00566 J	<0.0000800	<0.00200	<0.00200	<0.000500	1.04	0.941	1.98
BMW-21	10/23/15	<0.0008	0.00324 J	0.0703	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0623	<0.00008	<0.002	<0.002	<0.0005	<0.436	<0.948	<1.384
	12/30/15	<0.0008	0.00247 J	0.0478	<0.0003	<0.0003	<0.002	<0.003	0.126 J	<0.0003	0.0602	<0.00008	<0.002	<0.002	<0.0005	0.584	<2.00	2.58
	02/25/16	<0.0008	0.00327 J	0.0471	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0602	<0.00008	<0.002	<0.002	<0.0005	0.735	2.13	2.87
	04/07/16	<0.0008	0.00337 J	0.0472	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0653	<0.00008	<0.002	<0.002	<0.0005	0.470	<2.78	3.25
	06/09/16	<0.0008	0.0034 J	0.0457	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	0.32	<0.917	1.24
	08/11/16	<0.0008	0.00373 J	0.0445	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0527	<0.00008	<0.002	<0.002	<0.0005	0.655	<0.728	1.38
	10/26/16	<0.0008	0.0037 J	0.0443	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0611	<0.00008	<0.002	<0.002	<0.0005	0.383	1.61	1.99
	12/13/16	<0.0008	0.00217 J	0.0438	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0631	<0.00008	<0.002	<0.002	<0.0005	0.213	1.00	1.21
	06/11/18	<0.0008	0.00373 J	0.0438	<0.0003	<0.0003	<0.002	<0.003	0.233 J	<0.0003	0.07	<0.00008	<0.002	<0.002	<0.0005	<0.239	<0.939	<1.178
	09/13/18	--	0.00353 J	0.0412	--	--	<0.002	<0.003	0.136 J	<0.0003	0.0646	--	<0.002	--	--	0.562	1.49	2.052
	05/15/19	<0.0008	0.00399 J	0.0412	<0.0003	<0.0003	<0.002	<0.003	0.366 J	<0.0003	0.0613	<0.00008	<0.002	<0.002	<0.0005	<0.322	1.07	1.392
	09/04/19	--	0.00378	0.0409	--	--	--	<0.003	<0.1	--	0.0683	--	<0.002	--	--	0.506	1.51	2.06
	05/20/20	<0.0008	0.00434 J	0.0421	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0632	<0.00008	<0.002	<0.002	<0.0005	0.562	1.76	2.32
	09/29/20	--	0.00814	0.0420	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0663	--	--	<0.00200	--	0.699	1.48	2.18
	06/14/21	<0.0008	0.004 J	0.0398	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0617	<0.0000800	<0.00200	<0.00200	<0.000500	0.555	1.62	2.18
	10/06/21	<0.0008	0.00790	0.0394	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0653	<0.0000800	<0.00200	<0.00200	<0.000500	0.609	1.77	2.38
	05/26/22	<0.0008	0.00413 J	0.0398	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0659	<0.0000800	<0.00200	<0.00200	<0.000500	0.662	1.47	2.13
	09/22/22	<0.000800	0.00589	0.042	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0739	<0.0000800	<0.00200	<0.00200	<0.000500	0.449	0.903	1.35
	05/23/23	<0.000800	0.00358 J	0.0382	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.068	<0.0000800	<0.00200	<0.00200	<0.000500	0.567	1.05	1.62
	08/16/23	<0.000800	0.00485 J	0.0385	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0726	<0.0000800	<0.00200	<0.00200	<0.000500	0.348 J	1.65	2.00
	05/23/24	<0.000800	0.00408 J	0.0389	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0693	<0.0000800	<0.00200	<0.00200	<0.000500	0.705	1.39	2.10
	08/07/24	<0.000800	0.00392 J	0.0381	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0689	<0.0000800	<0.00200	<0.00200	<0.000500	0.567	0.389 J	0.955

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Comb.^
BMW-22	10/23/15	<0.0008	<0.002	0.106	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	1.59	2.11	3.70
	12/30/15	<0.0008	<0.002	0.084	<0.0003	<0.0003	<0.002	<0.003	0.186 J	<0.0003	0.0594	<0.00008	<0.002	<0.002	<0.0005	0.973	<1.55	2.52
	02/25/16	<0.0008	<0.002	0.0761	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0801	<0.00008	<0.002	<0.002	<0.0005	0.594	<1.93	2.52
	04/07/16	<0.0008	<0.002	0.072	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0773	<0.00008	<0.002	<0.002	<0.0005	0.480	1.46	1.94
	06/08/16	<0.0008	0.00206 J	0.0667	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0847	<0.00008	<0.002	<0.002	<0.0005	0.888	1.88	2.77
	08/11/16	<0.0008	<0.002	0.0679	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	0.607	1.93	2.54
	10/26/16	<0.0008	0.00216 J	0.0645	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0753	<0.00008	<0.002	<0.002	<0.0005	0.633	1.02	1.65
	12/13/16	<0.0008	0.00232 J	0.0655	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0689	<0.00008	<0.002	<0.002	<0.0005	<0.209	1.05	1.26
	06/11/18	<0.0008	<0.002	0.0638	<0.0003	<0.0003	<0.002	<0.003	0.312 J	<0.0003	0.089	<0.00008	<0.002	<0.002	<0.0005	0.522	<1.020	1.54
	09/13/18	--	<0.002	0.063	--	--	<0.002	<0.003	0.205 J	<0.0003	0.0882	--	<0.002	--	--	1.29	2.89	4.18
	05/15/19	<0.0008	<0.002	0.0618	<0.0003	<0.0003	<0.002	<0.003	0.351 J	<0.0003	0.0779	<0.00008	<0.002	<0.002	<0.0005	3.36	1.64	5.00
	09/09/19	--	<0.002	0.0599	--	--	--	<0.003	<0.100	--	0.0829	--	<0.002	--	--	0.954	1.85	2.81
	05/20/20	<0.0008	<0.002	0.0621	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0855	<0.00008	<0.002	<0.002	<0.0005	0.909	2.67	3.58
	09/29/20	--	<0.002	0.0598	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0837	--	--	<0.002	--	0.621	3.13	3.75
	06/14/21	<0.0008	<0.002	0.0609	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0776	<0.00008	<0.002	<0.002	<0.0005	0.415	1.64	2.05
	10/06/21	<0.0008	<0.002	0.0576	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0779	<0.00008	<0.002	<0.002	<0.0005	0.695	1.43	2.12
	05/26/22	<0.0008	<0.002	0.0626	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0830	<0.00008	<0.002	<0.002	<0.0005	1.22	2.21	3.43
	09/22/22	<0.000800	0.00206 J	0.0643	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0887	<0.0000800	<0.00200	<0.00200	<0.000500	0.900	2.14	3.04
	05/23/23	<0.000800	<0.00200	0.0613	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0832	<0.0000800	<0.00200	<0.00200	<0.000500	0.878	3.13	4.00
	08/15/23	<0.000800	<0.00200	0.0734	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0875	<0.0000800	<0.00200	<0.00200	<0.000500	1.55	1.76	3.31
	05/23/24	<0.000800	<0.00200	0.0885	<0.000300	<0.000300	<0.00200	<0.00300	0.126 J	<0.000300	0.0837	<0.0000800	<0.00200	<0.00200	<0.000500	0.839	3.26	4.10
	08/07/24	<0.000800	<0.00200	0.0607	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0849	<0.0000800	<0.00200	<0.00200	<0.000500	0.826	1.85	2.68
BMW-23	10/23/15	<0.0008	<0.002	0.0519	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0802	<0.00008	<0.002	<0.002	<0.0005	1.19	<1.91	3.10
	12/30/15	<0.0008	<0.002	0.0462	<0.0003	<0.0003	<0.002	<0.003	0.122 J	<0.0003	0.0897	<0.00008	<0.002	<0.002	<0.0005	0.711	<2.62	3.33
	02/25/16	<0.0008	<0.002	0.0488	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0959	<0.00008	<0.002	<0.002	<0.0005	0.604	<1.78	2.38
	04/07/16	<0.0008	<0.002	0.0472	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.095	<0.00008	<0.002	<0.002	<0.0005	0.723	1.98	2.70
	06/08/16	<0.0008	<0.002	0.0497	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.103	<0.00008	<0.002	<0.002	<0.0005	0.654	1.29	1.94
	08/11/16	<0.0008	<0.002	0.0458	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.077	<0.00008	<0.002	<0.002	<0.0005	0.936	1.94	2.88
	10/26/16	<0.0008	<0.002	0.0437	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0856	<0.00008	<0.002	<0.002	<0.0005	0.472	1.76	2.23
	12/13/16	<0.0008	<0.002	0.0407	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0817	<0.00008	<0.002	<0.002	<0.0005	<0.225	0.704	0.93
	06/11/18	<0.0008	<0.002	0.0381	<0.0003	<0.0003	<0.002	<0.003	0.204 J	<0.0003	0.106	<0.00008	<0.002	<0.002	<0.0005	0.442	1.79	2.23
	09/13/18	--	<0.002	0.0414	--	--	<0.002	<0.003	0.190 J	<0.0003	0.0915	--	<0.002	--	--	0.774	1.23	2.00
	05/15/19	<0.0008	0.0024	0.0381	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0951	<0.00008	<0.002	<0.002	<0.0005	2.54	1	3.54
	09/09/19	--	<0.002	0.0382	--	--	--	<0.003	<0.100	--	0.0896	--	<0.002	--	--	0.583	2.4	2.98
	05/20/20	<0.0008	<0.002	0.039	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0927	<0.00008	<0.002	<0.002	<0.0005	0.669	2.27	2.93
	09/29/20	--	<0.002	0.0383	<0.000300	<0.000300	<0.00200	<0.00300	0.302 J	<0.000300	0.0861	--	--	<0.00200	--	0.687	0	0.687
	06/14/21	<0.0008	<0.002	0.0433	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0837	<0.00008	<0.002	<0.002	<0.0005	0.742	1.75	2.49
	10/06/21	<0.0008	<0.002	0.0367	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0827	<0.00008	<0.002	<0.002	<0.0005	0.59	1.77	2.36
	05/26/22	<0.0008	<0.002	0.0426	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0820	--	--	--	--	0.542	1.43	1.97
	09/22/22	<0.000800	<0.00200	0.042	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.087	<0.0000800	<0.00200	<0.00200	<0.000500	0.651	1.97	2.62
	05/23/23	<0.000800	<0.00200	0.0398	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.093	<0.0000800	<0.00200	<0.00200	<0.000500	0.524	0.807	1.33
	08/15/23	<0.000800	<0.00200	0.0404	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0855	<0.0000800	<0.00200	<0.00200	<0.000500	1.18	2.16	3.33
	05/23/24	<0.000800	<0.00200	0.0419	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.09	<0.0000800	<0.00200	<0.00200	<0.000500	0.261 J	1.79	2.05
	08/07/24	<0.000800	<0.00200	0.0415	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0809	<0.0000800	<0.00200	<0.00200	<0.000500	0.831	0.937	1.77

**TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL**

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Ti	Ra 226	Ra 228	Ra 226/228 Comb.^
BMW-24	10/23/15	<0.0008	0.00494 J	1.87	<0.0003	<0.0003	<0.002	0.00802	0.247 J	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	1.83	3.32	5.15
	12/30/15	<0.0008	0.00579	0.801	<0.0003	<0.0003	<0.002	0.0146	0.391 J	<0.0003	0.0161	<0.00008	<0.002	<0.002	<0.0005	0.485	<1.66	2.15
	02/25/16	<0.0008	0.00442 J	0.645	<0.0003	<0.0003	<0.002	0.0137	0.236 J	<0.0003	0.0267	<0.00008	<0.002	<0.002	<0.0005	1.20	<1.93	3.13
	04/07/16	<0.0008	0.00376 J	0.202	<0.0003	<0.0003	<0.002	0.0238	0.109 J	<0.0003	0.0415	<0.00008	<0.002	<0.002	<0.0005	<0.349	<1.58	<1.929
	06/08/16	<0.0008	0.00481 J	0.181	<0.0003	<0.0003	<0.002	0.0227	0.147 J	<0.0003	0.0475	<0.00008	<0.002	<0.002	<0.0005	0.360	1.26	1.62
	08/11/16	<0.0008	0.00414 J	1.26	<0.0003	<0.0003	<0.002	0.00707	0.225 J	<0.0003	0.00938 J	<0.00008	<0.002	<0.002	<0.0005	0.564	<0.942	1.51
	10/26/16	<0.0008	0.00364 J	1.88	<0.0003	<0.0003	<0.002	<0.003	0.305 J	<0.0003	0.00767 J	<0.00008	<0.002	<0.002	<0.0005	1.37	1.31	2.68
	12/13/16	<0.0008	0.00498 J	1.96	<0.0003	<0.0003	<0.002	0.00326 J	0.3 J	<0.0003	0.00914 J	<0.00008	<0.002	<0.002	<0.0005	0.270	1.16	1.43
	06/11/18	<0.0008	0.00266 J	0.487	<0.0003	<0.0003	<0.002	0.00633	0.466	<0.0003	0.0198	<0.00008	<0.002	<0.002	<0.0005	0.668	0.975	1.643
	09/13/18	--	<0.002	2.19	--	--	<0.002	0.00304 J	0.769	<0.0003	0.00764 J	--	<0.002	--	--	1.82	1.45	3.27
	05/15/19	<0.0008	0.00272 J	0.221	<0.0003	<0.0003	<0.002	0.000643	0.219 J	<0.0003	0.0512	<0.00008	<0.002	<0.002	<0.0005	1.45	<1.21	2.66
	09/09/19	--	<0.002	1.48	--	--	--	<0.003	0.534	--	0.00826 J	--	<0.002	--	--	0.584	1.41	2
	05/20/20	<0.0008	0.00207 J	0.244	<0.0003	<0.0003	<0.002	0.0109	0.129 J	<0.0003	0.046	<0.00008	<0.002	<0.002	<0.0005	0.532	<2.45	2.99
	09/29/20	--	<0.00200	1.85	<0.000300	<0.000300	<0.00200	<0.00300	0.725	<0.000300	0.00563 J	--	--	<0.00200	--	1.24	0.892	2.14
	06/14/21	<0.0008	<0.002	0.212	<0.0003	<0.0003	<0.002	0.00512	0.251 J	<0.0003	0.0497	<0.00008	<0.002	<0.002	<0.0005	0.486	1.77	2.26
	10/06/21	<0.000800	<0.00200	1.60	<0.000300	<0.000300	<0.00200	<0.00300	0.312 J	<0.000300	0.00545 J	<0.000400	<0.00200	<0.00200	<0.000500	1.04	2.85	3.89
	05/26/22	<0.0008	<0.0002	0.176	<0.0003	<0.0003	<0.002	0.00834	0.160 J	<0.0003	0.0499	<0.00008	<0.002	<0.002	<0.0005	0.401	0.678	1.08
	09/22/22	<0.000800	<0.00200	1.88	<0.000300	<0.000300	<0.00200	<0.00300	0.483	<0.000300	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.894	1.05	1.95
	05/23/23	<0.000800	<0.00200	0.2	<0.000300	<0.000300	0.0108	0.00683	0.119 J	<0.000300	0.054	<0.0000800	<0.00200	<0.00200	<0.000500	0.64	0.386 J	1.03
	08/15/23	<0.000800	<0.00200	1.54	<0.000300	<0.000300	<0.00200	<0.00300	0.553	<0.000300	0.00983 J	<0.0000800	<0.00200	<0.00200	<0.000500	1.92	1.83	3.74
	05/23/24	<0.000800	<0.00200	0.252	<0.000300	<0.000300	<0.00200	<0.00300	0.104 J	<0.000300	0.0537	<0.0000800	<0.00200	<0.00200	<0.000500	0.955	2.41	3.36
	08/07/24	<0.000800	<0.00200	0.752	<0.000300	<0.000300	0.013	<0.00300	0.358 J	<0.000300	0.0266	<0.0000800	<0.00200	<0.00200	<0.000500	1.32	2.96	4.28
BMW-26	09/13/16	<0.0008	0.017	0.0425	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0944	<0.00008	0.00215 J	<0.002	<0.0005	0.154	<1.02	1.17
	10/26/16	<0.0008	0.00318 J	0.0731	<0.0003	<0.0003	<0.002	0.00402 J	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.175	<0.695	0.87
	12/14/16	<0.0008	<0.002	0.0424	<0.0003	0.000823 J	<0.002	0.236	0.344 J	<0.0003	0.0527	<0.00008	<0.002	<0.002	<0.0005	0.177	<1.29	1.47
	01/23/17	<0.0008	0.0325	0.0446	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000594 J	0.0977	<0.00008	0.0035 J	<0.002	<0.0005	0.351	0.936	1.29
	02/23/17	<0.0008	<0.002	0.0705	<0.0003	<0.0003	<0.002	<0.003	0.106 J	0.000726 J	0.0052 J	<0.00008	<0.002	<0.002	<0.0005	0.306	0.951	1.26
	03/24/17	<0.0008	0.0107	0.0371	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000742 J	0.0964	<0.00008	0.00461 J	<0.002	<0.0005	0.335	<0.627	0.96
	04/24/17	<0.0008	0.00732	0.0322	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.099	<0.00008	0.00303 J	<0.002	<0.0005	<0.363	1.60	1.96
	05/25/17	<0.0008	0.00347 J	0.0243	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0951	<0.00008	0.00302 J	<0.002	<0.0005	<0.477	0.818	1.30
	06/29/17	<0.0008	0.0328	0.0352	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0985	<0.00008	0.00257 J	<0.002	<0.0005	0.198	0.677	0.88
	06/12/18	<0.0008	0.00316 J	0.0222	<0.0003	<0.0003	0.00231 J	<0.003	<0.100	0.00152	0.111	<0.00008	0.0029 J	<0.002	<0.0005	<0.251	<0.508	<0.759
	09/13/18	--	0.0165	0.0360	--	--	<0.002	<0.003	<0.100	<0.0003	0.11	--	<0.002	--	--	<0.426	0.826	1.252
	05/15/19	<0.0008	<0.002	0.0253	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.101	<0.00008	0.00218 J	<0.002	<0.0005	0.457	<1.13	1.587
	09/04/19	--	0.00725	0.0317	--	--	--	<0.003	<0.1	--	0.109	--	<0.002	--	--	0.126	1.53	1.66
	05/20/20	<0.0008	<0.002	0.0293	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0999	<0.00008	<0.002	<0.002	<0.0005	0.158	0.696	0.853
	09/29/20	--	0.00466 J	0.0314	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.107	--	--	<0.00200	--	0.234	0.161	0.395
	06/14/21	<0.0008	<0.002	0.0273	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.099	<0.00008	<0.002	<0.002	<0.0005	0.149	1.05	1.20
	10/06/21	<0.0008	0.00436 J	0.0297	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.105	<0.00008	<0.002	<0.002	<0.0005	0.145 J	0.97	1.12
	05/26/22	<0.0008	<0.002	0.0209	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.104	<0.00008	<0.002	<0.002	<0.0005	0.184J	<0.573	<0.306
	09/22/22	<0.000800	<0.00200	0.0138	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.119	<0.0000800	<0.00200	<0.00200	<0.000500	0.0569 U	0.318 J	0.375 J
	05/23/23	<0.000800	<0.00200	0.0217	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.104	<0.0000800	<0.00200	<0.00200	<0.000500	0.172 J	<0.684	<0.169
	08/16/23	<0.000800	<0.00200	0.00892	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.107	<0.0000800	<0.00200	<0.00200	<0.000500	0.455	0.99	1.45
	05/23/24	<0.000800	<0.00200	0.0208	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.111	<0.0000800	<0.00200	<0.00200	<0.000500	0.417	<0.604	0.417 J
	05/23/24	<0.000800	<0.00200	0.0233	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.108	<0.0000800	<0.00200	<0.00200	<0.000500	0.236	0.404 J	0.641 J
	08/07/24	<0.000800	<0.00200	0.0132	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.105	<0.0000800	<0.00200	<0.00200	<0.000500	0.337	<0.457	0.337 J

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Ti	Ra 226	Ra 228	Ra 226/228 Comb.^
BMW-27	09/13/16	<0.0008	0.00536	0.0434	<0.0003	0.000615 J	<0.002	0.15	0.668	0.000432 J	0.0541	<0.00008	<0.002	<0.002	<0.0005	0.308	<1.14	1.45
	10/26/16	<0.0008	0.00625	0.0339	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0933	<0.00008	<0.002	<0.002	<0.0005	0.156	1.94	2.10
	12/14/16	<0.0008	0.0051	0.0342	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0932	<0.00008	<0.002	<0.002	<0.0005	<0.12	<1.05	<1.17
	01/23/17	<0.0008	0.00845	0.0333	<0.0003	0.000707 J	0.00278 J	0.195	0.573	0.000323 J	0.0484	<0.00008	<0.002	<0.002	<0.0005	0.369	0.934	1.30
	02/23/17	<0.0008	<0.002	0.0704	<0.0003	<0.0003	<0.002	<0.003	0.252 J	0.000736 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.209	0.660	0.87
	03/24/17	<0.0008	0.00319 J	0.0296	<0.0003	0.000776 J	<0.002	0.222	0.738	<0.0003	0.0474	<0.00008	<0.002	<0.002	<0.0005	0.414	<0.725	1.14
	04/24/17	<0.0008	<0.002	0.0269	<0.0003	0.000659 J	<0.002	0.21	0.663	<0.0003	0.0497	<0.00008	<0.002	<0.002	<0.0005	<0.452	1.53	1.98
	05/25/17	<0.0008	<0.002	0.0266	<0.0003	0.000521 J	<0.002	0.2	1.61	0.000439 J	0.0471	<0.00008	<0.002	<0.002	<0.0005	<0.443	1.38	1.82
	06/29/17	<0.0008	0.00593	0.0307	<0.0003	0.00851 J	0.00266 J	0.255	0.717	<0.0003	0.048	<0.00008	<0.002	<0.002	<0.0005	0.303	0.628	0.93
	06/12/18	<0.0008	0.00223 J	0.0182	<0.0003	<0.0003	<0.002	<0.003	<0.100	0.00097 J	0.0721	<0.00008	<0.002	<0.002	<0.0005	0.305	<0.5860	0.891
	09/13/18	--	0.00467 J	0.0250	--	--	0.002 J	0.190	0.750	<0.0003	0.0531	--	<0.002	--	--	0.691	1.04	1.731
	05/15/19	<0.0008	<0.002	0.0238	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0943	<0.00008	<0.002	<0.002	<0.0005	<0.195	0.962	1.157
	09/04/19	--	0.00759	0.32	--	--	--	<0.003	<0.1	--	0.107	--	<0.002	--	--	0.0726	1.68	1.75
	05/20/20	<0.0008	<0.002	0.025	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.084	<0.00008	<0.002	<0.002	<0.0005	0.265	0.255	0.52
	09/29/20	--	0.00494 J	0.0313	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	0.0003	0.110	--	<0.00200	--	--	0.147	<1.09	0.147
	06/14/21	<0.0008	<0.002	0.021	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.075	<0.00008	<0.002	<0.002	<0.0005	0.0262	0.558	0.584 J
	10/06/21	<0.0008	0.00384 J	0.0375	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0883	<0.00008	<0.002	<0.002	<0.0005	0.358	0.585 J	0.943 J
	05/26/22	<0.0008	<0.002	0.0121	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0538	<0.00008	<0.002	<0.002	<0.0005	<0.510	0.556	0.607
	09/22/22	<0.000800	<0.00200	0.00890 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0814	<0.0000800	<0.00200	<0.00200	<0.000500	0.164 J	0.367 J	0.531
	05/23/23	<0.000800	<0.00200	0.0355	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0793	<0.0000800	<0.00200	<0.00200	<0.000500	0.308	1.44	1.75
	08/16/23	<0.000800	<0.00200	0.00644 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.113	<0.0000800	<0.00200	<0.00200	<0.000500	<0.37	<0.574	<0.683
	05/23/24	<0.000800	<0.00200	0.0312	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0935	<0.0000800	<0.00200	<0.00200	<0.000500	0.264	0.0338	0.30
	08/07/24	<0.000800	<0.00200	0.0257	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0835	<0.0000800	<0.00200	<0.00200	<0.000500	0.736	0.826	1.56
BMW-28	12/14/16	0.00117 J	<0.002	0.0509	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.11	<0.00008	0.0103	0.00445 J	<0.0005	<0.566	<2.22	2.79
	01/23/17	0.00101 J	<0.002	0.0518	<0.0003	<0.0003	<0.002	<0.003	0.104 J	<0.0003	0.116	<0.00008	0.00881	<0.002	<0.0005	0.626	1.12	1.75
	02/23/17	<0.0008	<0.002	0.0734	<0.0003	<0.0003	<0.002	<0.003	0.11 J	0.000965 J	0.00514 J	<0.00008	<0.002	<0.002	<0.0005	0.168	0.835	1.00
	03/24/17	0.00121 J	<0.002	0.046	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.1	<0.00008	0.00773	0.00208 J	<0.0005	1.04	1.17	2.21
	04/24/17	0.00113 J	<0.002	0.047	<0.0003	<0.0003	<0.002	<0.003	0.19 J	<0.0003	0.109	<0.00008	0.00766	<0.002	<0.0005	0.356	1.880	2.24
	05/25/17	0.00119 J	<0.002	0.0468	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000427 J	0.102	<0.00008	0.00764	<0.002	<0.0005	<0.739	1.170	1.91
	06/29/17	<0.0008	0.00253 J	0.0549	<0.0003	<0.0003	<0.002	0.0084	0.137 J	<0.0003	0.104	<0.00008	0.00754	<0.002	<0.0005	0.489	2.310	2.80
	08/01/17	<0.0008	0.0057	0.0524	<0.0003	<0.0003	<0.002	0.0115	<0.1	<0.0003	0.114	<0.00008	0.00707	<0.002	<0.0005	0.536	2.43	2.97
	06/12/18	<0.0008	<0.002	0.0505	<0.0003	<0.0003	<0.002	<0.003	0.529	0.00122	0.116	<0.00008	0.00764	<0.002	<0.0005	0.197	1.12	1.32
	09/14/18	--	<0.002	0.0419	--	--	<0.002	<0.003	0.445	<0.0003	0.114	--	0.00782	--	--	0.35	1.15	1.50
	05/15/19	<0.0008	<0.002	0.0285	<0.0003	<0.0003	<0.002	<0.003	0.496	<0.0003	0.119	<0.00008	0.0124	<0.002	<0.0005	0.289	0.924	1.21
	09/04/19	--	<0.002	0.027	--	--	<0.003	<0.1	--	0.131	--	--	0.00961	--	--	0.0173	3.20	3.21
	05/20/20	<0.0008	<0.002	0.0297	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.133	<0.00008	0.00617	<0.002	<0.0005	0.157	2.38	2.54
	09/30/20	--	<0.002	0.0150	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.0953	--	--	<0.002	--	0.229	2.53	2.76
	06/15/21	<0.0008	<0.002	0.00547 J	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000393 J	<0.00500	<0.00008	<0.002	<0.002	<0.0005	0.101	0.972	1.07
	10/07/21	<0.0008	<0.002	0.00461 J	<0.0003	<0.0003	<0.002	<0.003	0.290 J	<0.0003	0.00749 J	<0.00008	<0.002	<0.002	<0.0005	0.795	0.832	1.63
	10/7/21 DUP	<0.0008	<0.002	0.00487 J	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.00637 J	<0.00008	<0.002	<0.002	<0.0005	0.462	0.516 J	0.978
	05/26/22	<0.0008	<0.002	0.00766 J	<0.0003	<0.0003	<0.002	<0.003	0.119 J	<0.0003	0.0150	<0.00008	<0.002	<0.002	<0.0005	0.289	1.06	1.34
	09/23/22	<0.000800	<0.00200	0.00499 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0233	<0.0000800	0.00302 J	<0.00200	<0.000500	0.0750 U	0.312 J	0.387 J
	05/23/23	<0.000800	<0.00200	0.0107	<0.000300	<0.000300	<0.00200	<0.00300	0.163 J	<0.000300	0.121	<0.0000800	0.00643	<0.00200	<0.000500	0.753	<0.534	0.887 J
	5/23/2023 DUP	<0.000800	<0.00200	0.0101	<0.000300	<0.000300	<0.00200	<0.00300	0.167 J	<0.000300	0.121	<0.0000800	0.00631	<0.00200	<0.000500	0.528	<0.732	0.53
	08/16/23	<0.000800	<0.00200	0.0101	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.112	<0.0000800	0.00687	<0.00200	<0.000500	0.208 J	<0.547	0.430 J
	8/16/23 DUP	<0.000800	<0.00200	0.0108	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.111	<0.0000800	0.00693	<0.00200	<0.000500	0.298 J	0.712	1.01
	06/13/24	<0.000800	<0.00200	0.00953 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0369	<0.0000800	0.00309 J	<0.00200	<0.000500	0.633	0.429 J	1.06
	08/08/24	<0.000800	<0.00200	0.013	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0183	<0.0000800	<0.00200	<0.00200	<0.000500	0.691	0.414	1.10
	8/8/2024 DUP	<0.000800	<0.00200	0.012	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0176	<0.0000800	<0.00200	<0.00200	<0.000500	0.503	<0.446	0.503 J

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Comb.^
Assessment of Corrective Measures Delineation Well																		
BMW-32	06/13/19	NA	NA	NA	NA	NA	NA	0.00705	0.822	NA	0.115	NA	NA	NA	NA	NA	NA	NA
	07/08/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.116	NA	NA	NA	NA	NA	NA	NA
	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.115	NA	NA	NA	NA	NA	NA	NA
	09/30/20	NA	NA	NA	NA	NA	NA	0.00408 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/15/21	NA	NA	NA	NA	NA	NA	0.00370 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/07/21	NA	NA	NA	NA	NA	NA	0.00347 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/26/22	NA	NA	NA	NA	NA	NA	0.00307 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/23/22	NA	NA	NA	NA	NA	NA	0.00350 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/24/23	NA	NA	NA	NA	NA	NA	<0.00300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/16/23	NA	NA	NA	NA	NA	NA	<0.00300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/13/24	NA	NA	NA	NA	NA	NA	<0.00300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/08/24	NA	NA	NA	NA	NA	NA	<0.00300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1. All concentrations in mg/L except Ra, which is in pCi/L.
2. ^ - Sum of Ra 226 and Ra 228 concentrations.
3. J - Concentration is below method quantitation limit; result is an estimate.
4. "-" - not analyzed. Groundwater sample analyses for the second semi-annual sampling events were in some instances limited to Appendix IV parameters detected during the preceding first semi-annual sampling event in accordance with 40 CFR § 257.95(d)(1). Well BMW-33 was not formerly a CCR monitoring well; therefore, not all Appendix IV constituents were analyzed in samples from this well during every sampling event.

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-11AR	426.05	10/30/15	43.79	382.26
		12/30/15	43.11	382.94
		02/24/16	41.77	384.28
		04/07/16	40.49	385.56
		06/08/16	39.26	386.79
		08/11/16	39.24	386.81
		10/25/16	39.07	386.98
		12/13/16	40.57	385.48
		09/25/17	39.08	386.97
		06/11/18	38.17	387.88
		09/12/18	38.24	387.81
		05/15/19	31.87	394.18
		09/04/19	31.09	394.96
		05/20/20	29.09	396.96
		09/29/20	30.09	395.96
		06/14/21	29.51	396.54
		10/06/21	30.96	395.09
		05/26/22	33.31	392.74
		09/22/22	34.71	391.34
		05/23/23	34.73	391.32
BMW-18	357.83	08/15/23	35.56	390.49
		05/23/24	33.68	392.37
		08/07/24	32.16	393.89
		10/30/15	33.40	324.43
		12/30/15	32.16	325.67
		02/24/16	29.49	328.34
		04/07/16	28.98	328.85
		06/08/16	28.04	329.79
		08/11/16	28.19	329.64
		10/25/16	28.31	329.52
		12/13/16	29.88	327.95
		09/25/17	27.29	330.54
		06/11/18	25.44	332.39
		09/12/18	25.90	331.93
		05/15/19	21.97	335.86
		09/04/19	21.54	336.29
		05/20/20	19.45	338.38
		09/29/20	19.12	338.71
		06/15/21	16.58	341.25
		10/06/21	16.04	341.79
		05/26/22	15.41	342.42
		09/22/22	15.74	342.09
		05/23/23	13.87	343.96
		08/15/23	14.43	343.40
		05/23/24	12.92	344.91
		08/07/24	12.81	345.02

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-19	400.69	10/30/15	21.42	379.27
		12/30/15	20.14	380.55
		02/24/16	20.41	380.28
		04/07/16	19.56	381.13
		06/08/16	19.22	381.47
		08/11/16	20.84	379.85
		10/25/16	20.33	380.36
		12/13/16	24.11	376.58
		09/25/17	23.12	377.57
		06/11/18	19.02	381.67
		09/12/18	21.29	379.40
		05/15/19	12.49	388.20
		09/04/19	17.22	383.47
		05/20/20	13.48	387.21
		09/29/20	18.31	382.38
		06/15/21	10.91	389.78
		10/06/21	18.02	382.67
		05/26/22	18.09	382.60
		09/22/22	20.78	379.91
		05/23/23	16.42	384.27
		08/15/23	19.27	381.42
BMW-20	357.51	05/23/24	10.03	390.66
		08/07/24	14.26	386.43
		10/30/15	8.56	348.95
		12/30/15	8.81	348.70
		02/24/16	8.96	348.55
		04/07/16	9.24	348.27
		06/08/16	8.81	348.70
		08/11/16	8.52	348.99
		10/25/16	8.36	349.15
		12/13/16	10.21	347.30
		09/25/17	8.19	349.32
		06/11/18	9.27	348.24
		09/12/18	9.13	348.38
		05/15/19	7.16	350.35
		09/04/19	8.86	348.65
		05/20/20	8.86	348.65
		09/29/20	8.70	348.81
		06/14/21	8.16	349.35
		10/06/21	8.68	348.83
		05/26/22	9.86	347.65
		09/22/22	7.26	350.25
		05/23/23	9.62	347.89
		08/15/23	9.34	348.17
		05/23/24	7.46	350.05
		08/07/24	9.03	348.48

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-21	350.98	10/30/15	5.23	345.75
		12/30/15	4.09	346.89
		02/24/16	3.83	347.15
		04/07/16	3.93	347.05
		06/08/16	3.34	347.64
		08/11/16	4.56	346.42
		10/25/16	3.84	347.14
		12/13/16	6.89	344.09
		09/25/17	4.81	346.17
		06/11/18	5.27	345.71
		09/12/18	6.02	344.96
		05/15/19	4.23	346.75
		09/04/19	5.49	345.49
		05/20/20	4.42	346.56
		09/29/20	5.37	345.61
		06/14/21	4.11	346.87
		10/06/21	5.46	345.52
		05/26/22	5.09	345.89
		09/22/22	5.72	345.26
		05/23/23	4.98	346.00
		08/15/23	6.46	344.52
BMW-22	332.30	05/23/24	5.09	345.89
		08/07/24	5.36	345.62
		10/30/15	7.11	325.19
		12/30/15	6.17	326.13
		02/24/16	5.74	326.56
		04/07/16	7.33	324.97
		06/08/16	6.91	325.39
		08/11/16	5.96	326.34
		10/25/16	6.07	326.23
		12/13/16	7.86	324.44
		09/25/17	6.09	326.21
		06/11/18	6.07	326.23
		09/12/18	6.97	325.33
		05/15/19	4.47	327.83
		09/04/19	6.12	326.18
		05/20/20	4.62	327.68
		09/29/20	6.11	326.19
		06/14/21	10.24	322.06
		10/06/21	5.96	326.34
		05/26/22	6.74	325.56
		09/22/22	7.26	325.04
		05/23/23	5.71	326.59
		08/15/23	7.03	325.27
		05/23/24	5.81	326.49
		08/07/24	5.86	326.44

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-23	341.90	10/30/15	16.47	325.43
		12/30/15	15.34	326.56
		02/24/16	14.78	327.12
		04/07/16	13.98	327.92
		06/08/16	11.72	330.18
		08/11/16	15.21	326.69
		10/25/16	15.51	326.39
		12/13/16	17.56	324.34
		09/25/17	15.97	325.93
		06/11/18	15.19	326.71
		09/12/18	16.74	325.16
		05/15/19	9.98	331.92
		09/04/19	15.22	326.68
		05/20/20	11.79	330.11
		09/29/20	15.78	326.12
		06/14/21	10.34	331.56
		10/06/21	15.27	326.63
		05/26/22	25.96	315.94
		09/22/22	16.49	325.41
		05/23/23	13.97	327.93
		08/15/23	15.93	325.97
BMW-24	347.07	05/23/24	13.61	328.29
		08/07/24	14.37	327.53
		10/30/15	14.26	332.81
		12/30/15	12.09	334.98
		02/24/16	12.11	334.96
		04/07/16	12.03	335.04
		06/08/16	11.22	335.85
		08/11/16	12.73	334.34
		10/25/16	12.72	334.35
		12/13/16	14.27	332.80
		09/25/17	12.33	334.74
		06/11/18	12.11	334.96
		09/12/18	13.79	333.28
		05/15/19	9.83	337.24
		09/04/19	12.09	334.98
		05/20/20	10.34	336.73
		09/29/20	12.11	334.96
		06/14/21	9.04	338.03
		10/06/21	11.67	335.40
		05/26/22	10.82	336.25
		09/22/22	12.56	334.51
		05/23/23	10.17	336.90
		08/15/23	12.24	334.83
		05/23/24	9.54	337.53
		08/07/24	10.52	336.55

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-25*	339.95	10/30/15	13.79	326.16
		12/30/15	12.91	327.04
		02/24/16	11.96	327.99
		04/07/16	11.92	328.03
		06/08/16	10.62	329.33
		08/11/16	12.61	327.34
		10/25/16	12.46	327.49
		12/13/16	13.92	326.03
		09/25/17	15.97	323.98
		06/11/18	NM	NM
		09/12/18	NM	NM
		05/15/19	NM	NM
		09/04/19	13.12	326.83
		05/20/20	22.67	317.28
		09/29/20	12.59	327.36
		06/14/21	NM	NM
		10/06/21	NM	NM
		05/26/22	17.63	322.32
		09/22/22	19.12	320.83
		05/23/23	17.41	322.54
		08/15/23	18.71	321.24
BMW-26	369.44	05/23/24	16.21	323.74
		08/07/24	17.09	322.86
		9/13/16	1.77	367.67
		10/25/16	2.39	367.05
		12/13/16	4.02	365.42
		1/23/17	2.21	367.23
		2/23/17	2.67	366.77
		3/24/17	2.46	366.98
		4/24/17	2.24	367.20
		5/25/17	2.13	367.31
		06/29/17	2.12	367.32
		09/25/17	2.12	367.32
		06/11/18	2.72	366.72
		09/12/18	2.56	366.88
		05/15/19	1.62	367.82
		09/04/19	2.29	367.15
		05/20/20	1.39	368.05
		09/29/20	2.17	367.27
		06/14/21	1.73	367.71
		10/06/21	2.09	367.35
		05/26/22	2.27	367.17
		09/22/22	2.79	366.65
		05/23/23	1.17	368.27
		08/15/23	2.81	366.63
		05/23/24	1.72	367.72
		08/07/24	2.31	367.13

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-27	376.25	9/13/16	2.12	374.13
		10/25/16	2.46	373.79
		12/13/16	4.11	372.14
		1/23/17	2.51	373.74
		2/23/17	2.84	373.41
		3/24/17	2.67	373.58
		4/24/17	3.07	373.18
		5/25/17	2.67	373.58
		06/29/17	2.24	374.01
		09/25/17	2.47	373.78
		06/11/18	3.59	372.66
		09/12/18	3.26	372.99
		05/15/19	2.79	373.46
		09/04/19	1.89	374.36
		05/20/20	2.31	373.94
		09/29/20	2.91	373.34
		06/14/21	2.39	373.86
		10/06/21	3.12	373.13
		05/26/22	3.07	373.18
		09/22/22	3.07	373.18
		05/23/23	2.34	373.91
		08/15/23	3.26	372.99
		05/23/24	1.59	374.66
		08/07/24	2.17	374.08
BMW-28	373.21	12/13/16	55.02	318.19
		1/23/17	45.94	327.27
		2/23/17	39.97	333.24
		3/24/17	39.82	333.39
		4/24/17	36.81	336.40
		5/25/17	34.91	338.30
		6/29/17	33.85	339.36
		8/1/2017	39.05	334.16
		09/25/17	32.52	340.69
		06/11/18	28.91	344.30
		09/12/18	27.69	345.52
		05/15/19	18.22	354.99
		09/04/19	16.31	356.90
		05/20/20	13.38	359.83
		09/29/20	13.67	359.54
		06/15/21	8.78	364.43
		10/06/21	9.96	363.25
		05/26/22	8.06	365.15
		09/22/22	8.54	364.67
		05/23/23	6.18	367.03
		08/15/23	8.12	365.09
		05/23/24	5.19	368.02
		08/07/24	6.17	367.04

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES A1 AREA LANDFILL

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
BMW-32^	344.09	06/15/21	10.67	333.42
		10/07/21	13.61	330.48
		05/26/22	17.64	326.45
		09/22/22	13.86	330.23
		05/23/23	11.31	332.78
		08/15/23	13.86	330.23
		05/23/24	10.82	333.27
		08/07/24	12.51	331.58
BMW-33	427.70	06/15/21	25.46	402.24
		10/06/21	26.91	400.79
		05/26/22	27.64	400.06
		09/22/22	27.74	399.96
		05/23/23	26.21	401.49
		08/15/23	26.48	401.22
		05/23/24	26.42	401.28
		08/07/24	26.14	401.56

Notes:

1. Abbreviations: ft - feet; amsl - above mean sea level; bgs - below ground surface
2. * - Non-CCR well used only to evaluate groundwater water elevations.
3. ^ - Assessment of Corrective Measures delineation well.

APPENDIX A
2024 LABORATORY ANALYTICAL REPORTS



July 02, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:
RE: Vistra-A1 Landfill

Order No.: 2405313

Dear Will Vienne:

DHL Analytical, Inc. received 8 sample(s) on 5/25/2024 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211 - TX-C24-00120



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Eric Lau

From: John DuPont
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
Subject: FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)

Anions (Cl, F, and SO₄)

TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)

Ra-226

Ra-228

SIGNATURE

DATE

5.24.24

CUSTODY SEAL

[Signature]

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 24MAY24
ACTWGT: 50.00 LB
CAD: 113203857/INET4535
DIMS: 23x16x16 IN

BILL SENDER

TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222
INV:
PO: 23643V-17

REF:

DEPT:



583J4C4589AE3

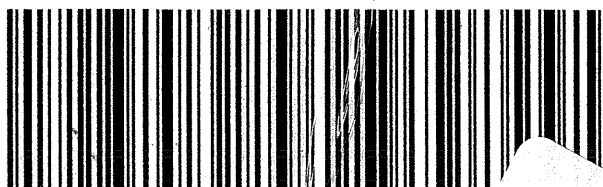
SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7765 4740 7858
0201

44 BSMA

78664

TX-US AUS



RT 197
FZ

1
12:00
7858
05.25

DHL
ANALYTICAL

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 24MAY24
ACTWGT: 50.00 LB
CAD: 113203857/INET4535
DIMS: 23x16x16 IN

BILL SENDER

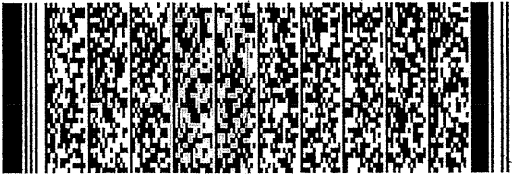
TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222
INV:
PO: 23643V-17

REF:

DEPT:



58334/C4589AE3

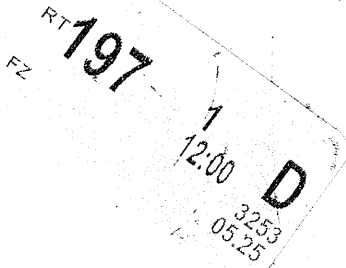
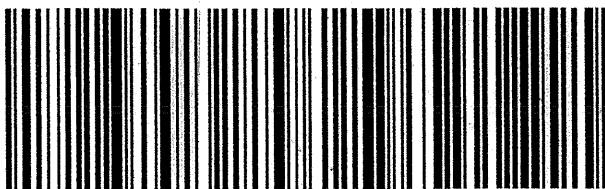
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PRIORITY OVERNIGHT

TRK# 7765 4755 3253
0201

44 BSMA

78664

TX-US AUS



SDR



CUSTODY SEAL

DATE 5-7-24

SIGNATURE [Signature]

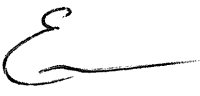
Sample Receipt Checklist

Client Name: BBA Engineering

Date Received: 5/25/2024

Work Order Number: 2405313

Received by: CF

Checklist completed by: 
Signature

5/28/2024
Date

Reviewed by:

Initials 

5/28/2024
Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒ NA ☐

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 13171

Adjusted? no Checked by EL

Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Cooler #	1	2
Temp °C	4.9	6.0
Seal Intact	Y	Y

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Laboratory Name: DHL Analytical, Inc.								
Laboratory Review Checklist: Reportable Data								
Project Name: Vistra-A1 Landfill				LRC Date: 7/2/24				
Reviewer Name: Carlos Castro				Laboratory Work Order: 2405313				
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵	
R1	OI	Chain-of-Custody (C-O-C)						
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X					R1-01
		2) Were all departures from standard conditions described in an exception report?			X			
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X					
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X					
R3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?	X					
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X					
		3) Were calculations checked by a peer or supervisor?	X					
		4) Were all analyte identifications checked by a peer or supervisor?	X					
		5) Were sample detection limits reported for all analytes not detected?	X					
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X			
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X			
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X			
		9) If required for the project, TICs reported?			X			
R4	O	Surrogate Recovery Data						
		1) Were surrogates added prior to extraction?			X			
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X			
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?	X					
		2) Were blanks analyzed at the appropriate frequency?	X					
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X					
		4) Were blank concentrations < MDL?	X					
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?			X			
R6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?	X					
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X					
		3) Were LCSs analyzed at the required frequency?	X					
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X					
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X					
		6) Was the LCSD RPD within QC limits (if applicable)?	X					
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS and MSD?	X					
		2) Were MS/MSD analyzed at the appropriate frequency?	X					
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03	
		4) Were MS/MSD RPDs within laboratory QC limits?	X					
R8	OI	Analytical Duplicate Data						
		1) Were appropriate analytical duplicates analyzed for each matrix?	X					
		2) Were analytical duplicates analyzed at the appropriate frequency?	X					
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X					
R9	OI	Method Quantitation Limits (MQLs):						
		1) Are the MQLs for each method analyte included in the laboratory data package?	X					
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X					
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X					
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X					
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X					
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X					

Laboratory Name: DHL Analytical, Inc.							
Laboratory Review Checklist (continued): Supporting Data							
Project Name: Vistra-A1 Landfill				LRC Date: 7/2/24			
Reviewer Name: Carlos Castro				Laboratory Work Order: 2405313			
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw Data (NELAC Section 5.5.10)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	X				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) The amount of analyte measured in the duplicate,
 - b) The calculated RPD, and
 - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager


Signature

07/02/24
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Lab Order: 2405313

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M.
Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 5/25/24. A total of 8 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 5/29/24 the matrix spike and matrix spike duplicate recoveries (2405313-05 MS/MSD) were below control limits for Chloride and Sulfate. This was due to matrix effect. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 5/30/24 the matrix spike and matrix spike duplicate recoveries were out of control limits for Calcium. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis performed on 5/30/24 the PDS recovery was out of control limits for Calcium. This is flagged accordingly in the QC summary report. The serial dilution was within control limits for this analyte. No further corrective actions were taken.

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Lab Order: 2405313**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2405313-01	BMW-24		05/23/24 10:05 AM	05/25/2024
2405313-02	BMW-23		05/23/24 11:00 AM	05/25/2024
2405313-03	BMW-22		05/23/24 11:55 AM	05/25/2024
2405313-04	BMW-21		05/23/24 12:50 PM	05/25/2024
2405313-05	BMW-26		05/23/24 01:55 PM	05/25/2024
2405313-06	DUP-1		05/23/24 01:55 PM	05/25/2024
2405313-07	BMW-27		05/23/24 03:00 PM	05/25/2024
2405313-08	BMW-11AR		05/23/24 04:15 PM	05/25/2024

Lab Order: 2405313
Client: BBA Engineering
Project: Vistra-A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2405313-01A	BMW-24	05/23/24 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-24	05/23/24 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-24	05/23/24 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-24	05/23/24 10:05 AM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-01B	BMW-24	05/23/24 10:05 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-24	05/23/24 10:05 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-24	05/23/24 10:05 AM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-02A	BMW-23	05/23/24 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-23	05/23/24 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-23	05/23/24 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-23	05/23/24 11:00 AM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-02B	BMW-23	05/23/24 11:00 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-23	05/23/24 11:00 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-23	05/23/24 11:00 AM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-03A	BMW-22	05/23/24 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-22	05/23/24 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-22	05/23/24 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-22	05/23/24 11:55 AM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-03B	BMW-22	05/23/24 11:55 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-22	05/23/24 11:55 AM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-22	05/23/24 11:55 AM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-04A	BMW-21	05/23/24 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-21	05/23/24 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-21	05/23/24 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-21	05/23/24 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-04B	BMW-21	05/23/24 12:50 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-21	05/23/24 12:50 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-21	05/23/24 12:50 PM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576

Lab Order: 2405313
Client: BBA Engineering
Project: Vistra-A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2405313-05A	BMW-26	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-26	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-26	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-26	05/23/24 01:55 PM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-05B	BMW-26	05/23/24 01:55 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-26	05/23/24 01:55 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-26	05/23/24 01:55 PM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-06A	DUP-1	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	DUP-1	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	DUP-1	05/23/24 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	DUP-1	05/23/24 01:55 PM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-06B	DUP-1	05/23/24 01:55 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	DUP-1	05/23/24 01:55 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	DUP-1	05/23/24 01:55 PM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-07A	BMW-27	05/23/24 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-27	05/23/24 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-27	05/23/24 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-27	05/23/24 03:00 PM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-07B	BMW-27	05/23/24 03:00 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-27	05/23/24 03:00 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-27	05/23/24 03:00 PM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576
2405313-08A	BMW-11AR	05/23/24 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-11AR	05/23/24 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-11AR	05/23/24 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/29/24 06:53 AM	115572
	BMW-11AR	05/23/24 04:15 PM	Aqueous	SW7470A	Mercury Aq Prep	05/29/24 09:10 AM	115574
2405313-08B	BMW-11AR	05/23/24 04:15 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-11AR	05/23/24 04:15 PM	Aqueous	E300	Anion Preparation	05/29/24 09:00 AM	115580
	BMW-11AR	05/23/24 04:15 PM	Aqueous	M2540C	TDS Preparation	05/29/24 11:06 AM	115576

Lab Order: 2405313
Client: BBA Engineering
Project: Vistra-A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2405313-01A	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:08 PM	CETAC2_HG_240529 A
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	2	05/30/24 02:35 PM	ICP-MS4_240530A
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:08 AM	ICP-MS5_240530A
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:16 AM	ICP-MS5_240530A
2405313-01B	BMW-24	Aqueous	E300	Anions by IC method - Water	115580	10	05/29/24 08:42 PM	IC2_240529B
	BMW-24	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 02:42 AM	IC2_240529B
	BMW-24	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
2405313-02A	BMW-23	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:11 PM	CETAC2_HG_240529 A
	BMW-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 02:37 PM	ICP-MS4_240530A
	BMW-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:11 AM	ICP-MS5_240530A
	BMW-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:19 AM	ICP-MS5_240530A
2405313-02B	BMW-23	Aqueous	E300	Anions by IC method - Water	115580	10	05/29/24 09:00 PM	IC2_240529B
	BMW-23	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 04:12 AM	IC2_240529B
	BMW-23	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
2405313-03A	BMW-22	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:13 PM	CETAC2_HG_240529 A
	BMW-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:13 AM	ICP-MS5_240530A
	BMW-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	20	05/30/24 11:21 AM	ICP-MS5_240530A
	BMW-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 02:39 PM	ICP-MS4_240530A
2405313-03B	BMW-22	Aqueous	E300	Anions by IC method - Water	115580	10	05/29/24 09:18 PM	IC2_240529B
	BMW-22	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 04:30 AM	IC2_240529B
	BMW-22	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
2405313-04A	BMW-21	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:15 PM	CETAC2_HG_240529 A
	BMW-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	5	05/30/24 02:41 PM	ICP-MS4_240530A
	BMW-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:16 AM	ICP-MS5_240530A
	BMW-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:24 AM	ICP-MS5_240530A
2405313-04B	BMW-21	Aqueous	E300	Anions by IC method - Water	115580	10	05/29/24 10:48 PM	IC2_240529B

Lab Order: 2405313
Client: BBA Engineering
Project: Vistra-A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2405313-04B	BMW-21	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 04:48 AM	IC2_240529B
	BMW-21	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
2405313-05A	BMW-26	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:17 PM	CETAC2_HG_240529A
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	2	05/30/24 02:43 PM	ICP-MS4_240530A
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:18 AM	ICP-MS5_240530A
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:26 AM	ICP-MS5_240530A
	BMW-26	Aqueous	E300	Anions by IC method - Water	115580	10	05/29/24 11:06 PM	IC2_240529B
2405313-05B	BMW-26	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 05:06 AM	IC2_240529B
	BMW-26	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
	BMW-26	Aqueous	E300	Anions by IC method - Water	115580	1	05/29/24 04:45 PM	WC_240529A
2405313-06A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:20 PM	CETAC2_HG_240529A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	2	05/30/24 02:45 PM	ICP-MS4_240530A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:21 AM	ICP-MS5_240530A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:29 AM	ICP-MS5_240530A
	DUP-1	Aqueous	E300	Anions by IC method - Water	115580	10	05/30/24	IC2_240529B
2405313-06B	DUP-1	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 05:24 AM	IC2_240529B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
	DUP-1	Aqueous	E300	Anions by IC method - Water	115580	1	05/29/24 04:45 PM	WC_240529A
2405313-07A	BMW-27	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:22 PM	CETAC2_HG_240529A
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:23 AM	ICP-MS5_240530A
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:32 AM	ICP-MS5_240530A
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	2	05/30/24 02:47 PM	ICP-MS4_240530A
2405313-07B	BMW-27	Aqueous	E300	Anions by IC method - Water	115580	10	05/30/24 12:18 AM	IC2_240529B
	BMW-27	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 05:42 AM	IC2_240529B
	BMW-27	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A
2405313-08A	BMW-11AR	Aqueous	SW7470A	Mercury Total: Aqueous	115574	1	05/29/24 12:24 PM	CETAC2_HG_240529A
	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	2	05/30/24 02:49 PM	ICP-MS4_240530A
	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	1	05/30/24 10:26 AM	ICP-MS5_240530A

Lab Order: 2405313
Client: BBA Engineering
Project: Vistra-A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2405313-08A	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115572	10	05/30/24 11:34 AM	ICP-MS5_240530A
2405313-08B	BMW-11AR	Aqueous	E300	Anions by IC method - Water	115580	10	05/30/24 12:36 AM	IC2_240529B
	BMW-11AR	Aqueous	E300	Anions by IC method - Water	115580	1	05/30/24 06:00 AM	IC2_240529B
	BMW-11AR	Aqueous	M2540C	Total Dissolved Solids	115576	1	05/29/24 04:45 PM	WC_240529A

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-24
Lab ID: 2405313-01
Collection Date: 05/23/24 10:05 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:08 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:08 AM
Barium	0.252	0.00300	0.0100		mg/L	1	05/30/24 10:08 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:08 AM
Boron	0.694	0.0200	0.0600		mg/L	2	05/30/24 02:35 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:08 AM
Calcium	70.9	1.00	3.00		mg/L	10	05/30/24 11:16 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:08 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:08 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:08 AM
Lithium	0.0537	0.00500	0.0100		mg/L	1	05/30/24 10:08 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:08 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:08 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:08 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:08 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	172	3.00	10.0		mg/L	10	05/29/24 08:42 PM
Fluoride	0.104	0.100	0.400	J	mg/L	1	05/30/24 02:42 AM
Sulfate	249	10.0	30.0		mg/L	10	05/29/24 08:42 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	970	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-23
Lab ID: 2405313-02
Collection Date: 05/23/24 11:00 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:11 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:11 AM
Barium	0.0419	0.00300	0.0100		mg/L	1	05/30/24 10:11 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:11 AM
Boron	2.06	0.100	0.300		mg/L	10	05/30/24 02:37 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:11 AM
Calcium	117	1.00	3.00		mg/L	10	05/30/24 11:19 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:11 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:11 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:11 AM
Lithium	0.0900	0.00500	0.0100		mg/L	1	05/30/24 10:11 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:11 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:11 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:11 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:11 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	280	3.00	10.0		mg/L	10	05/29/24 09:00 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/30/24 04:12 AM
Sulfate	502	10.0	30.0		mg/L	10	05/29/24 09:00 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	1740	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
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See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-22
Lab ID: 2405313-03
Collection Date: 05/23/24 11:55 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:13 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:13 AM
Barium	0.0885	0.00300	0.0100		mg/L	1	05/30/24 10:13 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:13 AM
Boron	3.35	0.100	0.300		mg/L	10	05/30/24 02:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:13 AM
Calcium	234	2.00	6.00		mg/L	20	05/30/24 11:21 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:13 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:13 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:13 AM
Lithium	0.0837	0.00500	0.0100		mg/L	1	05/30/24 10:13 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:13 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:13 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:13 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:13 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	290	3.00	10.0		mg/L	10	05/29/24 09:18 PM
Fluoride	0.126	0.100	0.400	J	mg/L	1	05/30/24 04:30 AM
Sulfate	890	10.0	30.0		mg/L	10	05/29/24 09:18 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	2360	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
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N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-21
Lab ID: 2405313-04
Collection Date: 05/23/24 12:50 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:16 AM
Arsenic	0.00408	0.00200	0.00500	J	mg/L	1	05/30/24 10:16 AM
Barium	0.0389	0.00300	0.0100		mg/L	1	05/30/24 10:16 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:16 AM
Boron	1.08	0.0500	0.150		mg/L	5	05/30/24 02:41 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:16 AM
Calcium	179	1.00	3.00		mg/L	10	05/30/24 11:24 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:16 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:16 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:16 AM
Lithium	0.0693	0.00500	0.0100		mg/L	1	05/30/24 10:16 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:16 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:16 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:16 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:15 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	437	3.00	10.0		mg/L	10	05/29/24 10:48 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/30/24 04:48 AM
Sulfate	475	10.0	30.0		mg/L	10	05/29/24 10:48 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	2130	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-26
Lab ID: 2405313-05
Collection Date: 05/23/24 01:55 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:18 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:18 AM
Barium	0.0208	0.00300	0.0100		mg/L	1	05/30/24 10:18 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:18 AM
Boron	0.515	0.0200	0.0600		mg/L	2	05/30/24 02:43 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:18 AM
Calcium	182	1.00	3.00		mg/L	10	05/30/24 11:26 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:18 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:18 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:18 AM
Lithium	0.111	0.00500	0.0100		mg/L	1	05/30/24 10:18 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:18 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:18 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:18 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:17 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	130	3.00	10.0		mg/L	10	05/29/24 11:06 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/30/24 05:06 AM
Sulfate	681	10.0	30.0		mg/L	10	05/29/24 11:06 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	1890	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: DUP-1
Lab ID: 2405313-06
Collection Date: 05/23/24 01:55 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:21 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:21 AM
Barium	0.0233	0.00300	0.0100		mg/L	1	05/30/24 10:21 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:21 AM
Boron	0.519	0.0200	0.0600		mg/L	2	05/30/24 02:45 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:21 AM
Calcium	210	1.00	3.00		mg/L	10	05/30/24 11:29 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:21 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:21 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:21 AM
Lithium	0.108	0.00500	0.0100		mg/L	1	05/30/24 10:21 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:21 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:21 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:21 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:20 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	133	3.00	10.0		mg/L	10	05/30/24
Fluoride	<0.100	0.100	0.400		mg/L	1	05/30/24 05:24 AM
Sulfate	695	10.0	30.0		mg/L	10	05/30/24
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	1920	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
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See Final Page of Report for MQLs and MDLs

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-27
Lab ID: 2405313-07
Collection Date: 05/23/24 03:00 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:23 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:23 AM
Barium	0.0312	0.00300	0.0100		mg/L	1	05/30/24 10:23 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:23 AM
Boron	0.493	0.0200	0.0600		mg/L	2	05/30/24 02:47 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:23 AM
Calcium	183	1.00	3.00		mg/L	10	05/30/24 11:32 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:23 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:23 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:23 AM
Lithium	0.0935	0.00500	0.0100		mg/L	1	05/30/24 10:23 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:23 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:23 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:23 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:22 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	110	3.00	10.0		mg/L	10	05/30/24 12:18 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/30/24 05:42 AM
Sulfate	606	10.0	30.0		mg/L	10	05/30/24 12:18 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	1740	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 02-Jul-24

CLIENT: BBA Engineering
Project: Vistra-A1 Landfill
Project No: 23643V-17
Lab Order: 2405313

Client Sample ID: BMW-11AR
Lab ID: 2405313-08
Collection Date: 05/23/24 04:15 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/30/24 10:26 AM
Arsenic	0.00381	0.00200	0.00500	J	mg/L	1	05/30/24 10:26 AM
Barium	0.0609	0.00300	0.0100		mg/L	1	05/30/24 10:26 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:26 AM
Boron	0.430	0.0200	0.0600		mg/L	2	05/30/24 02:49 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:26 AM
Calcium	88.9	1.00	3.00		mg/L	10	05/30/24 11:34 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:26 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	05/30/24 10:26 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/30/24 10:26 AM
Lithium	0.0379	0.00500	0.0100		mg/L	1	05/30/24 10:26 AM
Molybdenum	0.00229	0.00200	0.00500	J	mg/L	1	05/30/24 10:26 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/30/24 10:26 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/30/24 10:26 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/29/24 12:24 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	20.6	0.300	1.00		mg/L	1	05/30/24 06:00 AM
Fluoride	0.211	0.100	0.400	J	mg/L	1	05/30/24 06:00 AM
Sulfate	228	10.0	30.0		mg/L	10	05/30/24 12:36 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	970	50.0	50.0		mg/L	1	05/29/24 04:45 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT**RunID: CETAC2_HG_240416A**

Sample ID: DCS-114968	Batch ID: 114968	TestNo: SW7470A	Units: mg/L							
SampType: DCS	Run ID: CETAC2_HG_240416A	Analysis Date: 4/16/2024 10:05:58 AM	Prep Date: 4/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240529A

The QC data in batch 115574 applies to the following samples: 2405313-01A, 2405313-02A, 2405313-03A, 2405313-04A, 2405313-05A, 2405313-06A, 2405313-07A, 2405313-08A

Sample ID: MB-115574	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:02:02 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: LCS-115574	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:04:18 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00193 0.000200 0.00200 0 96.5 85 115

Sample ID: LCSD-115574	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:06:34 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00192 0.000200 0.00200 0 96.0 85 115 0.519 15

Sample ID: 2405317-02AMS	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:45:07 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00190 0.000200 0.00200 0 95.0 80 120

Sample ID: 2405317-02AMSD	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:47:24 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00185 0.000200 0.00200 0 92.5 80 120 2.67 15

Sample ID: 2405317-02ASD	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:49:41 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID: 2405317-02APDS	Batch ID: 115574	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 12:51:58 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00228 0.000200 0.00250 0 91.2 85 115

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240529A

Sample ID: ICV-240529	Batch ID: R133265	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 9:06:44 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00398	0.000200	0.00400	0	99.5	90	110			

Sample ID: CCV2-240529	Batch ID: R133265	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240529A	Analysis Date: 5/29/2024 10:01:50 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00214	0.000200	0.00200	0	107	90	110			

Sample ID: CCV3-240529		Batch ID: R133265		TestNo: SW7470A		Units: mg/L				
SampType: CCV		Run ID: CETAC2_HG_240529A		Analysis Date: 5/29/2024 12:56:16 PM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00216	0.000200	0.00200	0	108	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240304A

Sample ID: DCS4-114267	Batch ID: 114267	TestNo: SW6020B	Units: mg/L							
SampType: DCS4	Run ID: ICP-MS4_240304A	Analysis Date: 3/4/2024 11:57:00 AM	Prep Date: 3/1/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0299	0.0300	0.0300	0	99.8	70	130	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240530A

The QC data in batch 115572 applies to the following samples: 2405313-01A, 2405313-02A, 2405313-03A, 2405313-04A, 2405313-05A, 2405313-06A, 2405313-07A, 2405313-08A

Sample ID: MB-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 1:56:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID: LCS-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: LCS	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 1:58:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.189 0.0300 0.200 0 94.4 80 120

Sample ID: LCSD-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:00:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.202 0.0300 0.200 0 101 80 120 6.54 15

Sample ID: 2405293-01C SD	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:33:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.516 0.300 0 0.496 4.03 20

Sample ID: 2405293-01C PDS	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:52:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.897 0.0600 0.400 0.496 100 75 125

Sample ID: 2405293-01C MS	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: MS	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:54:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.693 0.0600 0.200 0.496 98.8 75 125

Sample ID: 2405293-01C MSD	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:56:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.700 0.0600 0.200 0.496 102 75 125 1.00 15

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240530A

Sample ID: ICV-240530		Batch ID: R133287		TestNo: SW6020B		Units: mg/L					
SampType: ICV		Run ID: ICP-MS4_240530A		Analysis Date: 5/30/2024 9:20:00 AM		Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.101	0.0300	0.100	0	101	90	110			

Sample ID: LCVL-240530	Batch ID: R133287	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 9:28:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0230	0.0300	0.0200	0	115	80	120			

Sample ID: CCV3-240530	Batch ID: R133287	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 11:12:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.202	0.0300	0.200	0	101	90	110			

Sample ID: CCV4-240530	Batch ID: R133287	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:26:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.201	0.0300	0.200	0	101	90	110			

Sample ID: CCV5-240530	Batch ID: R133287	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240530A	Analysis Date: 5/30/2024 2:59:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.203	0.0300	0.200	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240304A

Sample ID: DCS1-114267	Batch ID: 114267	TestNo: SW6020B	Units: mg/L							
SampType: DCS	Run ID: ICP-MS5_240304A	Analysis Date: 3/4/2024 10:02:00 AM	Prep Date: 3/1/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.000999	0.00250	0.00100	0	99.9	70	130	0	0	
Beryllium	0.000524	0.00100	0.000500	0	105	70	130	0	0	
Cadmium	0.000534	0.00100	0.000500	0	107	70	130	0	0	
Lead	0.000504	0.00100	0.000500	0	101	70	130	0	0	
Thallium	0.000481	0.00150	0.000500	0	96.2	70	130	0	0	

Sample ID: DCS2-114267	Batch ID: 114267	TestNo: SW6020B	Units: mg/L							
SampType: DCS2	Run ID: ICP-MS5_240304A	Analysis Date: 3/4/2024 10:05:00 AM	Prep Date: 3/1/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.266	0.300	0.300	0	88.8	70	130	0	0	
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Sample ID: DCS3-114267	Batch ID: 114267	TestNo: SW6020B	Units: mg/L							
SampType: DCS3	Run ID: ICP-MS5_240304A	Analysis Date: 3/4/2024 10:08:00 AM	Prep Date: 3/1/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00497	0.00500	0.00500	0	99.4	70	130	0	0	
Barium	0.00481	0.0100	0.00500	0	96.1	70	130	0	0	
Chromium	0.00499	0.00500	0.00500	0	99.8	70	130	0	0	
Cobalt	0.00512	0.00500	0.00500	0	102	70	130	0	0	
Lithium	0.00511	0.0100	0.00500	0	102	70	130	0	0	
Molybdenum	0.00478	0.00500	0.00500	0	95.7	70	130	0	0	
Selenium	0.00494	0.00500	0.00500	0	98.8	70	130	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240530A

The QC data in batch 115572 applies to the following samples: 2405313-01A, 2405313-02A, 2405313-03A, 2405313-04A, 2405313-05A, 2405313-06A, 2405313-07A, 2405313-08A

Sample ID: MB-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L
SampType: MBLK	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 9:58:00 AM	Prep Date: 5/29/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: LCS-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L
SampType: LCS	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:00:00 AM	Prep Date: 5/29/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.4	80	120			
Arsenic	0.201	0.00500	0.200	0	100	80	120			
Barium	0.199	0.0100	0.200	0	99.7	80	120			
Beryllium	0.197	0.00100	0.200	0	98.7	80	120			
Cadmium	0.201	0.00100	0.200	0	101	80	120			
Calcium	4.91	0.300	5.00	0	98.2	80	120			
Chromium	0.199	0.00500	0.200	0	99.5	80	120			
Cobalt	0.201	0.00500	0.200	0	101	80	120			
Lead	0.197	0.00100	0.200	0	98.7	80	120			
Lithium	0.199	0.0100	0.200	0	99.4	80	120			
Molybdenum	0.200	0.00500	0.200	0	100	80	120			
Selenium	0.208	0.00500	0.200	0	104	80	120			
Thallium	0.196	0.00150	0.200	0	98.2	80	120			

Sample ID: LCSD-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L
SampType: LCSD	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:03:00 AM	Prep Date: 5/29/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	98.0	80	120	1.39	15	
Arsenic	0.204	0.00500	0.200	0	102	80	120	1.64	15	
Barium	0.199	0.0100	0.200	0	99.4	80	120	0.332	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240530A

Sample ID: LCSD-115572	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:03:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.198	0.00100	0.200	0	98.8	80	120	0.049	15	
Cadmium	0.198	0.00100	0.200	0	98.9	80	120	1.60	15	
Calcium	4.93	0.300	5.00	0	98.6	80	120	0.404	15	
Chromium	0.198	0.00500	0.200	0	99.1	80	120	0.410	15	
Cobalt	0.205	0.00500	0.200	0	102	80	120	1.66	15	
Lead	0.198	0.00100	0.200	0	99.0	80	120	0.315	15	
Lithium	0.199	0.0100	0.200	0	99.4	80	120	0.009	15	
Molybdenum	0.201	0.00500	0.200	0	100	80	120	0.093	15	
Selenium	0.208	0.00500	0.200	0	104	80	120	0.086	15	
Thallium	0.198	0.00150	0.200	0	98.8	80	120	0.688	15	

Sample ID: 2405293-01C SD	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:42:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	0.0154	0.0250	0	0.0151				2.16	20	
Barium	0.0247	0.0500	0	0.0241				2.19	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	145	1.50	0	142				2.32	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	0.228	0.0500	0	0.228				0.007	20	
Molybdenum	0.0134	0.0250	0	0.0133				0.427	20	
Selenium	0.0115	0.0250	0	0.0107				7.15	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: 2405293-01C PDS	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:00:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.196	0.00250	0.200	0	98.0	75	125			
Arsenic	0.203	0.00500	0.200	0.0151	94.1	75	125			
Barium	0.222	0.0100	0.200	0.0241	99.0	75	125			
Beryllium	0.196	0.00100	0.200	0	97.8	75	125			
Cadmium	0.195	0.00100	0.200	0	97.4	75	125			
Calcium	139	0.300	5.00	142	-58.7	75	125			S
Chromium	0.196	0.00500	0.200	0	98.2	75	125			
Cobalt	0.191	0.00500	0.200	0	95.3	75	125			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240530A

Sample ID: 2405293-01C PDS	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:00:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	0.199	0.00100	0.200	0	99.7	75	125			
Lithium	0.421	0.0100	0.200	0.228	96.7	75	125			
Molybdenum	0.214	0.00500	0.200	0.0133	100	75	125			
Selenium	0.190	0.00500	0.200	0.0107	89.7	75	125			
Thallium	0.200	0.00150	0.200	0	100	75	125			

Sample ID: 2405293-01C MS	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: MS	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:03:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.2	75	125			
Arsenic	0.210	0.00500	0.200	0.0151	97.3	75	125			
Barium	0.225	0.0100	0.200	0.0241	100	75	125			
Beryllium	0.193	0.00100	0.200	0	96.4	75	125			
Cadmium	0.195	0.00100	0.200	0	97.5	75	125			
Calcium	143	0.300	5.00	142	9.41	75	125			S
Chromium	0.197	0.00500	0.200	0	98.4	75	125			
Cobalt	0.194	0.00500	0.200	0	97.1	75	125			
Lead	0.201	0.00100	0.200	0	100	75	125			
Lithium	0.420	0.0100	0.200	0.228	96.2	75	125			
Molybdenum	0.222	0.00500	0.200	0.0133	104	75	125			
Selenium	0.193	0.00500	0.200	0.0107	91.0	75	125			
Thallium	0.202	0.00150	0.200	0	101	75	125			

Sample ID: 2405293-01C MSD	Batch ID: 115572	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:06:00 AM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.1	75	125	0.136	15	
Arsenic	0.208	0.00500	0.200	0.0151	96.4	75	125	0.878	15	
Barium	0.223	0.0100	0.200	0.0241	99.4	75	125	0.787	15	
Beryllium	0.190	0.00100	0.200	0	95.1	75	125	1.33	15	
Cadmium	0.194	0.00100	0.200	0	96.8	75	125	0.690	15	
Calcium	140	0.300	5.00	142	-32.9	75	125	1.49	15	S
Chromium	0.194	0.00500	0.200	0	96.9	75	125	1.59	15	
Cobalt	0.194	0.00500	0.200	0	96.8	75	125	0.252	15	
Lead	0.198	0.00100	0.200	0	99.1	75	125	1.34	15	
Lithium	0.411	0.0100	0.200	0.228	91.8	75	125	2.12	15	
Molybdenum	0.220	0.00500	0.200	0.0133	103	75	125	0.902	15	
Selenium	0.189	0.00500	0.200	0.0107	89.3	75	125	1.79	15	
Thallium	0.199	0.00150	0.200	0	99.6	75	125	1.19	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240530A

Sample ID: ICV-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: ICV	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 9:33:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.0981	0.00250	0.100	0	98.1	90	110			
Arsenic	0.0992	0.00500	0.100	0	99.2	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Beryllium	0.0994	0.00100	0.100	0	99.4	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Calcium	2.67	0.300	2.50	0	107	90	110			
Chromium	0.103	0.00500	0.100	0	103	90	110			
Cobalt	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0988	0.00100	0.100	0	98.8	90	110			
Lithium	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.0979	0.00500	0.100	0	97.9	90	110			
Selenium	0.106	0.00500	0.100	0	106	90	110			
Thallium	0.0972	0.00150	0.100	0	97.2	90	110			

Sample ID: LCVL-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 9:50:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00209	0.00250	0.00200	0	104	80	120			
Arsenic	0.00495	0.00500	0.00500	0	98.9	80	120			
Barium	0.00484	0.0100	0.00500	0	96.9	80	120			
Beryllium	0.00108	0.00100	0.00100	0	108	80	120			
Cadmium	0.00105	0.00100	0.00100	0	105	80	120			
Calcium	0.0942	0.300	0.100	0	94.2	80	120			
Chromium	0.00516	0.00500	0.00500	0	103	80	120			
Cobalt	0.00513	0.00500	0.00500	0	103	80	120			
Lead	0.00102	0.00100	0.00100	0	102	80	120			
Lithium	0.0102	0.0100	0.0100	0	102	80	120			
Molybdenum	0.00507	0.00500	0.00500	0	101	80	120			
Selenium	0.00550	0.00500	0.00500	0	110	80	120			
Thallium	0.000991	0.00150	0.00100	0	99.1	80	120			

Sample ID: CCV1-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:31:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.194	0.00250	0.200	0	97.2	90	110			
Arsenic	0.197	0.00500	0.200	0	98.4	90	110			
Barium	0.196	0.0100	0.200	0	97.8	90	110			
Beryllium	0.196	0.00100	0.200	0	97.8	90	110			
Cadmium	0.197	0.00100	0.200	0	98.7	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240530A

Sample ID: CCV1-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 10:31:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.98	0.300	5.00	0	99.5	90	110			
Chromium	0.196	0.00500	0.200	0	98.2	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.196	0.00100	0.200	0	98.0	90	110			
Lithium	0.200	0.0100	0.200	0	100	90	110			
Molybdenum	0.199	0.00500	0.200	0	99.6	90	110			
Selenium	0.207	0.00500	0.200	0	104	90	110			
Thallium	0.194	0.00150	0.200	0	96.9	90	110			

Sample ID: CCV2-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:09:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.194	0.00250	0.200	0	97.2	90	110			
Arsenic	0.195	0.00500	0.200	0	97.5	90	110			
Barium	0.195	0.0100	0.200	0	97.4	90	110			
Beryllium	0.194	0.00100	0.200	0	97.0	90	110			
Cadmium	0.197	0.00100	0.200	0	98.3	90	110			
Calcium	5.07	0.300	5.00	0	101	90	110			
Chromium	0.197	0.00500	0.200	0	98.7	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.196	0.00100	0.200	0	98.1	90	110			
Lithium	0.198	0.0100	0.200	0	99.1	90	110			
Molybdenum	0.201	0.00500	0.200	0	101	90	110			
Selenium	0.203	0.00500	0.200	0	102	90	110			
Thallium	0.195	0.00150	0.200	0	97.6	90	110			

Sample ID: CCV3-240530	Batch ID: R133281	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240530A	Analysis Date: 5/30/2024 11:37:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.00	0.300	5.00	0	100	90	110			
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Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240529B

The QC data in batch 115580 applies to the following samples: 2405313-01B, 2405313-02B, 2405313-03B, 2405313-04B, 2405313-05B, 2405313-06B, 2405313-07B, 2405313-08B

Sample ID: MB-115580	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_240529B	Analysis Date: 5/29/2024 12:32:43 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID: LCS-115580	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_240529B	Analysis Date: 5/29/2024 12:50:43 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110
Fluoride	4.10	0.400	4.000	0	103	90	110
Sulfate	30.3	3.00	30.00	0	101	90	110

Sample ID: LCSD-115580	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_240529B	Analysis Date: 5/29/2024 1:08:43 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110	0.482	20
Fluoride	4.14	0.400	4.000	0	104	90	110	0.974	20
Sulfate	30.5	3.00	30.00	0	102	90	110	0.630	20

Sample ID: DCS3-115580	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: DCS3	Run ID: IC2_240529B	Analysis Date: 5/29/2024 5:42:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	0.986	1.00	1.000	0	98.6	65	135
Fluoride	0.418	0.400	0.4000	0	105	65	135
Sulfate	2.93	3.00	3.000	0	97.5	65	135

Sample ID: 2405285-01AMS	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_240529B	Analysis Date: 5/29/2024 7:12:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2310	100	2000	267.5	102	90	110
Fluoride	2050	40.0	2000	0	102	90	110
Sulfate	1980	300	2000	0	99.0	90	110

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240529B

Sample ID: 2405285-01AMSD	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_240529B	Analysis Date: 5/29/2024 7:30:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2320	100	2000	267.5	103	90	110	0.512	20	
Fluoride	2060	40.0	2000	0	103	90	110	0.682	20	
Sulfate	2000	300	2000	0	99.8	90	110	0.842	20	

Sample ID: 2405313-05BMS	Batch ID: 115580	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_240529B	Analysis Date: 5/29/2024 11:24:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	294	10.0	200.0	129.8	82.0	90	110			S
Fluoride	197	4.00	200.0	0	98.5	90	110			
Sulfate	786	30.0	200.0	681.2	52.5	90	110			S

Sample ID: 2405313-05BMSD	Batch ID: 115580	TestNo: E300				Units: mg/L				
SampType: MSD	Run ID: IC2_240529B	Analysis Date: 5/29/2024 11:42:00 PM				Prep Date: 5/29/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	291	10.0	200.0	129.8	80.8	90	110	0.867	20	S
Fluoride	196	4.00	200.0	0	97.9	90	110	0.699	20	
Sulfate	777	30.0	200.0	681.2	47.9	90	110	1.17	20	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240529B

Sample ID: ICV-240529	Batch ID: R133279	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_240529B	Analysis Date: 5/29/2024 11:56:43 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.3	1.00	25.00	0	105	90	110			
Fluoride	10.6	0.400	10.00	0	106	90	110			
Sulfate	77.9	3.00	75.00	0	104	90	110			

Sample ID: CCV1-240529	Batch ID: R133279	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_240529B	Analysis Date: 5/29/2024 10:12:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.4	1.00	10.00	0	104	90	110			
Fluoride	4.19	0.400	4.000	0	105	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Sample ID: CCV2-240529	Batch ID: R133279	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_240529B	Analysis Date: 5/30/2024 3:36:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.6	1.00	10.00	0	106	90	110			
Fluoride	4.22	0.400	4.000	0	106	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Sample ID: CCV3-240529	Batch ID: R133279	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_240529B	Analysis Date: 5/30/2024 6:54:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	4.22	0.400	4.000	0	106	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240529A

The QC data in batch 115576 applies to the following samples: 2405313-01B, 2405313-02B, 2405313-03B, 2405313-04B, 2405313-05B, 2405313-06B, 2405313-07B, 2405313-08B

Sample ID: MB-115576	Batch ID: 115576	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_240529A	Analysis Date: 5/29/2024 4:45:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID: LCS-115576	Batch ID: 115576	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_240529A	Analysis Date: 5/29/2024 4:45:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 749 10.0 745.6 0 100 90 113

Sample ID: 2405313-03B-DUP	Batch ID: 115576	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240529A	Analysis Date: 5/29/2024 4:45:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2370 50.0 0 2360 0.423 5

Sample ID: 2405313-04B-DUP	Batch ID: 115576	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240529A	Analysis Date: 5/29/2024 4:45:00 PM	Prep Date: 5/29/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2180 50.0 0 2125 2.56 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2405313
Project: Vistra-A1 Landfill

SQL SUMMARY REPORT

TestNo: E300	MDL	SQL
Analyte	mg/L	mg/L
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	MDL	SQL
Analyte	mg/L	mg/L
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

TestNo: SW7470A	MDL	SQL
Analyte	mg/L	mg/L
Mercury	0.0000800	0.000200

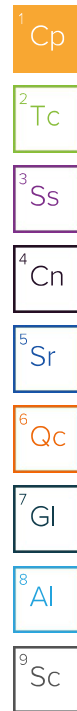
TestNo: M2540C	MDL	SQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: SQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP



ANALYTICAL REPORT

June 27, 2024



DHL Analytical, Inc.

Sample Delivery Group: L1741431
Samples Received: 05/30/2024
Project Number: 2405313
Description:

Report To: John DuPont
2300 Double Creek Drive
Round Rock, TX 78664

Entire Report Reviewed By:

Haley Torrence

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

BMW-24 L1741431-01 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 10:05 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

BMW-23 L1741431-02 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 11:00 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

BMW-22 L1741431-03 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 11:55 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

BMW-21 L1741431-04 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 12:50 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

BMW-26 L1741431-05 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 13:55 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

DUP-1 L1741431-06 Non-Potable Water

Collected by
Collected date/time
Received date/time

05/23/24 13:55 05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

BMW-27 L1741431-07 Non-Potable Water

Collected by

Collected date/time

Received date/time

05/23/24 15:00

05/30/24 10:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

BMW-11AR L1741431-08 Non-Potable Water

Collected by

Collected date/time

Received date/time

05/23/24 16:15

05/30/24 10:45

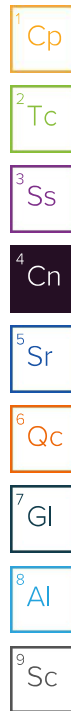
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2300130	1	06/07/24 00:07	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2302222	1	06/11/24 12:25	06/25/24 14:27	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2302222	1	06/11/24 12:25	06/14/24 19:36	ZRG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	2.41		0.553	0.674	0.930	0.486	06/25/2024 14:27	WG2300130
(T) Barium	76.9					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	89.0					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.36		0.687	0.970	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.955		0.407	0.196	0.274	0.200	06/14/2024 19:36	WG2302222
(T) Barium-133	94.2					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.79		0.482	0.588	0.820	0.427	06/25/2024 14:27	WG2300130
(T) Barium	88.5					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	99.4					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.05		0.545	0.883	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.261	J	0.254	0.111	0.327	0.218	06/14/2024 19:36	WG2302222
(T) Barium-133	93.7					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	3.26		0.497	0.608	0.805	0.421	06/25/2024 14:27	WG2300130
(T) Barium	87.1					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	91.1					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	4.10		0.657	0.889	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.839		0.429	0.179	0.377	0.259	06/14/2024 19:36	WG2302222
(T) Barium-133	83.8					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.39		0.342	0.451	0.577	0.301	06/25/2024 14:27	WG2300130
(T) Barium	82.8					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	105					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.10		0.487	0.619	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.705		0.347	0.159	0.224	0.176	06/14/2024 19:36	WG2302222
(T) Barium-133	89.2					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.301	U	0.330	0.441	0.604	0.315	06/25/2024 14:27	WG2300130
(T) Barium	81.7					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	104					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.417	J	0.416	0.630	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.417		0.254	0.115	0.178	0.147	06/14/2024 19:36	WG2302222
(T) Barium-133	88.7					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.404	J	0.399	0.522	0.707	0.370	06/25/2024 14:27	WG2300130
(T) Barium	72.7					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	90.6					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.641	J	0.442	0.732	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.236		0.191	0.0843	0.189	0.148	06/14/2024 19:36	WG2302222
(T) Barium-133	88.0					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.0338	U	0.623	0.737	1.14	0.599	06/25/2024 14:27	WG2300130
(T) Barium	80.0					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	94.9					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.298	U	0.656	1.15	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.264		0.204	0.0911	0.179	0.148	06/14/2024 19:36	WG2302222
(T) Barium-133	87.7					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.930		0.377	0.487	0.652	0.339	06/25/2024 14:27	WG2300130
(T) Barium	81.8					30.0-143	06/25/2024 14:27	WG2300130
(T) Yttrium	106					30.0-136	06/25/2024 14:27	WG2300130

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.43		0.474	0.694	06/25/2024 14:27	WG2302222

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.504		0.288	0.127	0.238	0.176	06/14/2024 19:36	WG2302222
(T) Barium-133	87.4					30.0-143	06/14/2024 19:36	WG2302222

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4086421-1 06/25/24 14:27

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.147	U	0.248	0.451	0.235
(T) Barium	81.7		81.7		
(T) Yttrium	89.5		89.5		

L1741431-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1741431-02 06/25/24 14:27 • (DUP) R4086421-5 06/25/24 14:27

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.79	0.482	0.820	0.427	2.50	0.462	0.761	0.398	32.9	1.06		20	3
(T) Barium	88.5				85.0	85.0							
(T) Yttrium	99.4				95.8	95.8							

Laboratory Control Sample (LCS)

(LCS) R4086421-2 06/25/24 14:27

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	10.0	9.74	97.4	80.0-120	
(T) Barium			94.3		
(T) Yttrium			91.6		

L1742183-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1742183-01 06/25/24 14:27 • (MS) R4086421-3 06/25/24 14:27 • (MSD) R4086421-4 06/25/24 14:27

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	33.3	0.787	30.9	30.6	90.3	89.4	1	70.0-130			0.912		20
(T) Barium		85.3			92.5	94.3							
(T) Yttrium		94.2			98.5	97.8							

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4082712-5 06/15/24 00:01

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.0161	U	0.0330	0.0676	0.0408
(T) Barium-133	84.7		84.7		

L1741431-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1741431-04 06/14/24 19:36 • (DUP) R4082712-4 06/14/24 19:36

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.705	0.347	0.224	0.176	0.450	0.313	0.327	0.229	44.1	0.546		20	3
(T) Barium-133	89.2				89.8	89.8							

Laboratory Control Sample (LCS)

(LCS) R4082712-1 06/14/24 19:36

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.59	112	75.0-125	
(T) Barium-133			78.8		

L1741431-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1741431-08 06/14/24 19:36 • (MS) R4082712-2 06/14/24 19:36 • (MSD) R4082712-3 06/14/24 19:36

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.504	19.7	22.3	96.0	109	1	75.0-125			12.2		20
(T) Barium-133		87.4			87.5	91.0							



GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

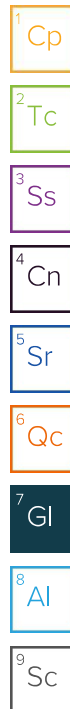
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

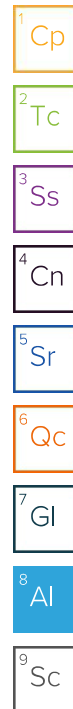
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX:

Work Order: 2405313

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

TEL: (615) 773-5923

FAX:

Acct #: DHLRRTX

A111

U741431

28-May-24

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
BMW-24	Aqueous	01C	05/23/24 10:05 AM	1LHDPEHNO3		1				J-01
BMW-24	Aqueous	01D	05/23/24 10:05 AM	1LHDPEHNO3	1					
BMW-23	Aqueous	02C	05/23/24 11:00 AM	1LHDPEHNO3		1				J-02
BMW-23	Aqueous	02D	05/23/24 11:00 AM	1LHDPEHNO3	1					
BMW-22	Aqueous	03C	05/23/24 11:55 AM	1LHDPEHNO3		1				J-03
BMW-22	Aqueous	03D	05/23/24 11:55 AM	1LHDPEHNO3	1					
BMW-21	Aqueous	04C	05/23/24 12:50 PM	1LHDPEHNO3		1				J-04
BMW-21	Aqueous	04D	05/23/24 12:50 PM	1LHDPEHNO3	1					
BMW-26	Aqueous	05C	05/23/24 01:55 PM	1LHDPEHNO3		1				J-05
BMW-26	Aqueous	05D	05/23/24 01:55 PM	1LHDPEHNO3	1					
DUP-1	Aqueous	06C	05/23/24 01:55 PM	1LHDPEHNO3		1				J-06
DUP-1	Aqueous	06D	05/23/24 01:55 PM	1LHDPEHNO3	1					
BMW-27	Aqueous	07C	05/23/24 03:00 PM	1LHDPEHNO3		1				J-07
BMW-27	Aqueous	07D	05/23/24 03:00 PM	1LHDPEHNO3	1					
BMW-11AR	Aqueous	08C	05/23/24 04:15 PM	1LHDPEHNO3		1				J-08
BMW-11AR	Aqueous	08D	05/23/24 04:15 PM	1LHDPEHNO3	1					

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RA Screen <0.5 mR/hr: ☒ Y ☐ N

Ambo

Date/Time

Date/Time

Relinquished by:

5/28/24 1700

Received by:

5/30/24 1045

Relinquished by:

Received by:



July 11, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198

FAX:

Order No.: 2406180

RE: VISTRA-MLSES-A1 LANDFILL CCR

Dear Will Vienne:

DHL Analytical, Inc. received 6 sample(s) on 6/15/2024 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211 - TX-C24-00120



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AnalyticalQCSummaryReport 2406180	22
MQLSummaryReport 2406180	41
Subcontract Report 2406180	42

Eric Lau

From: John DuPont
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
Subject: FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)

Anions (Cl, F, and SO₄)

TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)

Ra-226

Ra-228

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 14JUN24
ACTWGT: 50.00 LB
CAD: 113203857/INET4535
DIMS: 24x14x13 IN

BILL SENDER

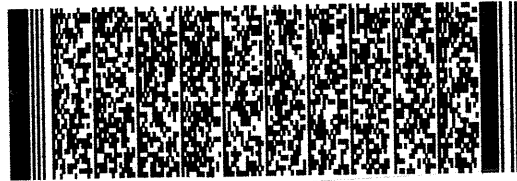
TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR.

ROUND ROCK TX 78664

(512) 388-8222
INV:
PO: 23643V-17

REF:

DEPT:



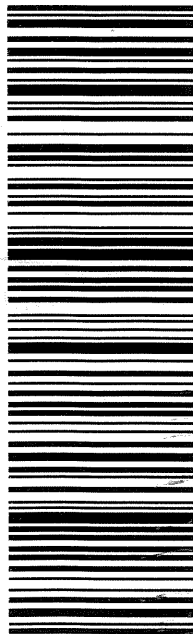
583J5B21D9AE3

SATURDAY 12:00P
PRIORITY OVERNIGHT

78664 AUS
TX - US

FedEx
TRK# 7768 7142 7484
0201

44 BSMA



#2640014 06/14 583J5B21D/9AE3

RT **197**

FZ

1
12:00

D
7484
06.15

Project/Client Name:

DATE: TIME:

☐ Grab ☐ Composite Matrix: ☐ Soil

TESTS/METHOD REQ:

COMMENTS:

C & G Containers, Inc. 800-396-7123

Sample ID:

COLLECTED BY:

☐ Water ☐ Other

PRESERVATIVE

24

Sample Receipt Checklist

Client Name: BBA Engineering

Date Received: 6/15/2024

Work Order Number: 2406180

Received by: EL

Checklist completed by:


Signature

6/17/2024

Date

Reviewed by:


Initials

6/17/2024

Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 13171
	Adjusted? <u>no</u>		Checked by <u>EL</u>
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Cooler #	1		
Temp °C	0.8		
Seal Intact	Y		

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Laboratory Name: DHL Analytical, Inc.								
Laboratory Review Checklist: Reportable Data								
Project Name: VISTRA-MLSES-A1 LANDFILL CCR				LRC Date: 7/11/24				
Reviewer Name: Carlos Castro				Laboratory Work Order: 2406180				
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵	
R1	OI	Chain-of-Custody (C-O-C)						
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X					R1-01
		2) Were all departures from standard conditions described in an exception report?			X			
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X					
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X					
R3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?	X					
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X					
		3) Were calculations checked by a peer or supervisor?	X					
		4) Were all analyte identifications checked by a peer or supervisor?	X					
		5) Were sample detection limits reported for all analytes not detected?	X					
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X			
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X			
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X			
		9) If required for the project, TICs reported?			X			
R4	O	Surrogate Recovery Data						
		1) Were surrogates added prior to extraction?			X			
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X			
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?	X					
		2) Were blanks analyzed at the appropriate frequency?	X					
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X					
		4) Were blank concentrations < MDL?	X					
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?			X			
R6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?	X					
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X					
		3) Were LCSs analyzed at the required frequency?	X					
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		X			R6-04	
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X					
		6) Was the LCSD RPD within QC limits (if applicable)?	X					
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS and MSD?	X					
		2) Were MS/MSD analyzed at the appropriate frequency?	X					
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X					
		4) Were MS/MSD RPDs within laboratory QC limits?	X					
R8	OI	Analytical Duplicate Data						
		1) Were appropriate analytical duplicates analyzed for each matrix?	X					
		2) Were analytical duplicates analyzed at the appropriate frequency?	X					
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X					
R9	OI	Method Quantitation Limits (MQLs):						
		1) Are the MQLs for each method analyte included in the laboratory data package?	X					
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X					
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X					
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X					
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X					
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X					

Laboratory Name: DHL Analytical, Inc.									
Laboratory Review Checklist (continued): Supporting Data									
Project Name: VISTRA-MLSES-A1 LANDFILL CCR					LRC Date: 7/11/24				
Reviewer Name: Carlos Castro					Laboratory Work Order: 2406180				
Prep Batch Number(s): See Prep Dates Report					Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵		
S1	OI	Initial Calibration (ICAL)							
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X						
		2) Were percent RSDs or correlation coefficient criteria met?	X						
		3) Was the number of standards recommended in the method used for all analytes?	X						
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X						
		5) Are ICAL data available for all instruments used?	X						
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X						
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):							
		1) Was the CCV analyzed at the method-required frequency?	X						
		2) Were percent differences for each analyte within the method-required QC limits?	X						
		3) Was the ICAL curve verified for each analyte?	X						
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X						
S3	O	Mass Spectral Tuning:							
		1) Was the appropriate compound for the method used for tuning?	X						
		2) Were ion abundance data within the method-required QC limits?	X						
S4	O	Internal Standards (IS):							
		1) Were IS area counts and retention times within the method-required QC limits?	X						
S5	OI	Raw Data (NELAC Section 5.5.10)							
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X						
		2) Were data associated with manual integrations flagged on the raw data?	X						
S6	O	Dual Column Confirmation							
		1) Did dual column confirmation results meet the method-required QC?			X				
S7	O	Tentatively Identified Compounds (TICs):							
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X				
S8	I	Interference Check Sample (ICS) Results:							
		1) Were percent recoveries within method QC limits?	X						
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions							
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01		
S10	OI	Method Detection Limit (MDL) Studies							
		1) Was a MDL study performed for each reported analyte?	X						
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X						
S11	OI	Proficiency Test Reports:							
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X						
S12	OI	Standards Documentation							
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X						
S13	OI	Compound/Analyte Identification Procedures							
		1) Are the procedures for compound/analyte identification documented?	X						
S14	OI	Demonstration of Analyst Competency (DOC)							
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X						
		2) Is documentation of the analyst's competency up-to-date and on file?	X						
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)							
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X						
S16	OI	Laboratory Standard Operating Procedures (SOPs):							
		1) Are laboratory SOPs current and on file for each method performed?	X						

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) The amount of analyte measured in the duplicate,
 - b) The calculated RPD, and
 - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager


Signature

07/11/24
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Lab Order: 2406180

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M.
Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 6/15/24. A total of 6 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R6-04

For Anions analysis performed on 6/21/24 the LCSD recovery was slightly below control limits for all analytes. This was due to instrument malfunction. These are flagged accordingly in the QC summary report. The remaining QC was within control limits for these analytes. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis performed on 6/20/24 the PDS recovery was out of control limits for Calcium. This is flagged accordingly in the QC summary report. The serial dilution was within control limits for this analyte. No further corrective actions were taken.

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Lab Order: 2406180**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2406180-01	BMW-33		06/13/24 08:50 AM	06/15/2024
2406180-02	BMW-20		06/13/24 09:55 AM	06/15/2024
2406180-03	BMW-32		06/13/24 10:40 AM	06/15/2024
2406180-04	BMW-19		06/13/24 11:35 AM	06/15/2024
2406180-05	BMW-18		06/13/24 12:30 PM	06/15/2024
2406180-06	BMW-28		06/13/24 01:20 PM	06/15/2024

Lab Order: 2406180
Client: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2406180-01A	BMW-33	06/13/24 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-33	06/13/24 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-33	06/13/24 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-33	06/13/24 08:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/19/24 08:26 AM	115884
2406180-01B	BMW-33	06/13/24 08:50 AM	Aqueous	E300	Anion Preparation	06/21/24 09:00 AM	115941
	BMW-33	06/13/24 08:50 AM	Aqueous	E300	Anion Preparation	06/21/24 09:00 AM	115941
	BMW-33	06/13/24 08:50 AM	Aqueous	M2540C	TDS Preparation	06/18/24 10:39 AM	115874
2406180-02A	BMW-20	06/13/24 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-20	06/13/24 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-20	06/13/24 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-20	06/13/24 09:55 AM	Aqueous	SW7470A	Mercury Aq Prep	06/19/24 08:26 AM	115884
2406180-02B	BMW-20	06/13/24 09:55 AM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-20	06/13/24 09:55 AM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-20	06/13/24 09:55 AM	Aqueous	M2540C	TDS Preparation	06/18/24 10:39 AM	115874
2406180-03A	BMW-32	06/13/24 10:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
2406180-04A	BMW-19	06/13/24 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-19	06/13/24 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-19	06/13/24 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-19	06/13/24 11:35 AM	Aqueous	SW7470A	Mercury Aq Prep	06/19/24 08:26 AM	115884
2406180-04B	BMW-19	06/13/24 11:35 AM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-19	06/13/24 11:35 AM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-19	06/13/24 11:35 AM	Aqueous	M2540C	TDS Preparation	06/18/24 10:39 AM	115874
2406180-05A	BMW-18	06/13/24 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-18	06/13/24 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-18	06/13/24 12:30 PM	Aqueous	SW7470A	Mercury Aq Prep	06/19/24 08:26 AM	115884
2406180-05B	BMW-18	06/13/24 12:30 PM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-18	06/13/24 12:30 PM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-18	06/13/24 12:30 PM	Aqueous	M2540C	TDS Preparation	06/18/24 10:39 AM	115874

Lab Order: 2406180
Client: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2406180-06A	BMW-28	06/13/24 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-28	06/13/24 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-28	06/13/24 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/20/24 07:03 AM	115905
	BMW-28	06/13/24 01:20 PM	Aqueous	SW7470A	Mercury Aq Prep	06/19/24 08:26 AM	115884
2406180-06B	BMW-28	06/13/24 01:20 PM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-28	06/13/24 01:20 PM	Aqueous	E300	Anion Preparation	06/21/24 03:00 PM	115941
	BMW-28	06/13/24 01:20 PM	Aqueous	M2540C	TDS Preparation	06/18/24 10:39 AM	115874

Lab Order: 2406180
Client: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2406180-01A	BMW-33	Aqueous	SW7470A	Mercury Total: Aqueous	115884	1	06/19/24 12:48 PM	CETAC2_HG_240619A
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/21/24 10:38 AM	ICP-MS4_240621A
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:26 PM	ICP-MS5_240620A
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	10	06/20/24 02:52 PM	ICP-MS5_240620A
2406180-01B	BMW-33	Aqueous	E300	Anions by IC method - Water	115941	10	06/21/24 11:13 PM	IC4_240621B
	BMW-33	Aqueous	E300	Anions by IC method - Water	115941	1	06/22/24 04:55 AM	IC4_240621B
	BMW-33	Aqueous	M2540C	Total Dissolved Solids	115874	1	06/18/24 03:55 PM	WC_240619A
2406180-02A	BMW-20	Aqueous	SW7470A	Mercury Total: Aqueous	115884	1	06/19/24 12:51 PM	CETAC2_HG_240619A
	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	10	06/20/24 02:55 PM	ICP-MS5_240620A
	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/21/24 10:40 AM	ICP-MS4_240621A
	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:29 PM	ICP-MS5_240620A
2406180-02B	BMW-20	Aqueous	E300	Anions by IC method - Water	115941	10	06/22/24 12:10 AM	IC4_240621B
	BMW-20	Aqueous	E300	Anions by IC method - Water	115941	1	06/22/24 05:14 AM	IC4_240621B
	BMW-20	Aqueous	M2540C	Total Dissolved Solids	115874	1	06/18/24 03:55 PM	WC_240619A
2406180-03A	BMW-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:31 PM	ICP-MS5_240620A
2406180-04A	BMW-19	Aqueous	SW7470A	Mercury Total: Aqueous	115884	1	06/19/24 12:53 PM	CETAC2_HG_240619A
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	10	06/20/24 02:57 PM	ICP-MS5_240620A
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/21/24 10:42 AM	ICP-MS4_240621A
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:34 PM	ICP-MS5_240620A
2406180-04B	BMW-19	Aqueous	E300	Anions by IC method - Water	115941	10	06/22/24 12:29 AM	IC4_240621B
	BMW-19	Aqueous	E300	Anions by IC method - Water	115941	1	06/22/24 05:33 AM	IC4_240621B
	BMW-19	Aqueous	M2540C	Total Dissolved Solids	115874	1	06/18/24 03:55 PM	WC_240619A
2406180-05A	BMW-18	Aqueous	SW7470A	Mercury Total: Aqueous	115884	1	06/19/24 01:00 PM	CETAC2_HG_240619A
	BMW-18	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/21/24 10:43 AM	ICP-MS4_240621A
	BMW-18	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:36 PM	ICP-MS5_240620A
2406180-05B	BMW-18	Aqueous	E300	Anions by IC method - Water	115941	10	06/22/24 12:48 AM	IC4_240621B

Lab Order: 2406180
Client: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2406180-05B	BMW-18	Aqueous	E300	Anions by IC method - Water	115941	1	06/22/24 07:08 AM	IC4_240621B
	BMW-18	Aqueous	M2540C	Total Dissolved Solids	115874	1	06/18/24 03:55 PM	WC_240619A
2406180-06A	BMW-28	Aqueous	SW7470A	Mercury Total: Aqueous	115884	1	06/19/24 01:02 PM	CETAC2_HG_240619A
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/21/24 10:45 AM	ICP-MS4_240621A
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	1	06/20/24 02:39 PM	ICP-MS5_240620A
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115905	5	06/20/24 03:00 PM	ICP-MS5_240620A
2406180-06B	BMW-28	Aqueous	E300	Anions by IC method - Water	115941	10	06/22/24 01:07 AM	IC4_240621B
	BMW-28	Aqueous	E300	Anions by IC method - Water	115941	1	06/22/24 07:27 AM	IC4_240621B
	BMW-28	Aqueous	M2540C	Total Dissolved Solids	115874	1	06/18/24 03:55 PM	WC_240619A

DHL Analytical, Inc.**Date:** 11-Jul-24

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Project No: 23643V-17
Lab Order: 2406180

Client Sample ID: BMW-33
Lab ID: 2406180-01
Collection Date: 06/13/24 08:50 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/20/24 02:26 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:26 PM
Barium	0.0759	0.00300	0.0100		mg/L	1	06/20/24 02:26 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:26 PM
Boron	0.184	0.0100	0.0300		mg/L	1	06/21/24 10:38 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:26 PM
Calcium	108	1.00	3.00		mg/L	10	06/20/24 02:52 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:26 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/20/24 02:26 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:26 PM
Lithium	0.0119	0.00500	0.0100		mg/L	1	06/21/24 10:38 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:26 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:26 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/20/24 02:26 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/19/24 12:48 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	46.6	0.300	1.00		mg/L	1	06/22/24 04:55 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/22/24 04:55 AM
Sulfate	126	1.00	3.00		mg/L	1	06/22/24 04:55 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	865	50.0	50.0		mg/L	1	06/18/24 03:55 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 11-Jul-24

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Project No: 23643V-17
Lab Order: 2406180

Client Sample ID: BMW-20
Lab ID: 2406180-02
Collection Date: 06/13/24 09:55 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/20/24 02:29 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:29 PM
Barium	0.0828	0.00300	0.0100		mg/L	1	06/20/24 02:29 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:29 PM
Boron	0.178	0.0100	0.0300		mg/L	1	06/21/24 10:40 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:29 PM
Calcium	103	1.00	3.00		mg/L	10	06/20/24 02:55 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:29 PM
Cobalt	0.00667	0.00300	0.00500		mg/L	1	06/20/24 02:29 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:29 PM
Lithium	0.0101	0.00500	0.0100		mg/L	1	06/21/24 10:40 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:29 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:29 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/20/24 02:29 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/19/24 12:51 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	49.2	0.300	1.00		mg/L	1	06/22/24 05:14 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/22/24 05:14 AM
Sulfate	134	1.00	3.00		mg/L	1	06/22/24 05:14 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	795	50.0	50.0		mg/L	1	06/18/24 03:55 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 11-Jul-24

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Project No: 23643V-17
Lab Order: 2406180

Client Sample ID: BMW-32
Lab ID: 2406180-03
Collection Date: 06/13/24 10:40 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/20/24 02:31 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 11-Jul-24

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Project No: 23643V-17
Lab Order: 2406180

Client Sample ID: BMW-19
Lab ID: 2406180-04
Collection Date: 06/13/24 11:35 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/20/24 02:34 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:34 PM
Barium	0.0109	0.00300	0.0100		mg/L	1	06/20/24 02:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:34 PM
Boron	0.218	0.0100	0.0300		mg/L	1	06/21/24 10:42 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:34 PM
Calcium	107	1.00	3.00		mg/L	10	06/20/24 02:57 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/20/24 02:34 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:34 PM
Lithium	0.0252	0.00500	0.0100		mg/L	1	06/21/24 10:42 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/20/24 02:34 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/19/24 12:53 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	2.12	0.300	1.00		mg/L	1	06/22/24 05:33 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/22/24 05:33 AM
Sulfate	377	10.0	30.0		mg/L	10	06/22/24 12:29 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	765	10.0	10.0		mg/L	1	06/18/24 03:55 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 11-Jul-24

CLIENT: BBA Engineering
Project: VISTRA-MLSES-A1 LANDFILL CCR
Project No: 23643V-17
Lab Order: 2406180

Client Sample ID: BMW-18
Lab ID: 2406180-05
Collection Date: 06/13/24 12:30 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/20/24 02:36 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:36 PM
Barium	0.0329	0.00300	0.0100		mg/L	1	06/20/24 02:36 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:36 PM
Boron	0.447	0.0100	0.0300		mg/L	1	06/21/24 10:43 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:36 PM
Calcium	8.89	0.100	0.300		mg/L	1	06/20/24 02:36 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:36 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/20/24 02:36 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:36 PM
Lithium	0.0124	0.00500	0.0100		mg/L	1	06/21/24 10:43 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:36 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:36 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/20/24 02:36 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/19/24 01:00 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	17.4	0.300	1.00		mg/L	1	06/22/24 07:08 AM
Fluoride	0.172	0.100	0.400	J	mg/L	1	06/22/24 07:08 AM
Sulfate	86.7	1.00	3.00		mg/L	1	06/22/24 07:08 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	480	10.0	10.0		mg/L	1	06/18/24 03:55 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: 11-Jul-24

CLIENT: BBA Engineering
 Project: VISTRA-MLSES-A1 LANDFILL CCR
 Project No: 23643V-17
 Lab Order: 2406180

Client Sample ID: BMW-28
 Lab ID: 2406180-06
 Collection Date: 06/13/24 01:20 PM
 Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/20/24 02:39 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:39 PM
Barium	0.00953	0.00300	0.0100	J	mg/L	1	06/20/24 02:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:39 PM
Boron	0.219	0.0100	0.0300		mg/L	1	06/21/24 10:45 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:39 PM
Calcium	49.1	0.500	1.50		mg/L	5	06/20/24 03:00 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:39 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/20/24 02:39 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/20/24 02:39 PM
Lithium	0.0369	0.00500	0.0100		mg/L	1	06/21/24 10:45 AM
Molybdenum	0.00309	0.00200	0.00500	J	mg/L	1	06/20/24 02:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/20/24 02:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/20/24 02:39 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/19/24 01:02 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	4.82	0.300	1.00		mg/L	1	06/22/24 07:27 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/22/24 07:27 AM
Sulfate	299	10.0	30.0		mg/L	10	06/22/24 01:07 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JS			
Total Dissolved Solids (Residue, Filterable)	544	10.0	10.0		mg/L	1	06/18/24 03:55 PM

Qualifiers: ND - Not Detected at the SDL
 J - Analyte detected between SDL and RL
 B - Analyte detected in the associated Method Blank
 DF- Dilution Factor
 N - Parameter not NELAP certified
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
 C - Sample Result or QC discussed in Case Narrative
 RL - Reporting Limit (MQL adjusted for moisture and sample size)
 SDL - Sample Detection Limit
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240416A

Sample ID: DCS-114968	Batch ID: 114968	TestNo: SW7470A	Units: mg/L							
SampType: DCS	Run ID: CETAC2_HG_240416A	Analysis Date: 4/16/2024 10:05:58 AM	Prep Date: 4/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240619A

The QC data in batch 115884 applies to the following samples: 2406180-01A, 2406180-02A, 2406180-04A, 2406180-05A, 2406180-06A

Sample ID: MB-115884	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:14:48 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: LCS-115884	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:19:20 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00195 0.000200 0.00200 0 97.5 85 115

Sample ID: LCSD-115884	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:21:36 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00197 0.000200 0.00200 0 98.5 85 115 1.02 15

Sample ID: 2406123-01BMS	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:26:08 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00990 0.00100 0.0100 0 99.0 80 120

Sample ID: 2406123-01BMSD	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:28:23 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00935 0.00100 0.0100 0 93.5 80 120 5.71 15

Sample ID: 2406123-01BSD	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:30:39 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.00200 0.00500 0 0 0 0 10

Sample ID: 2406123-01BPDS	Batch ID: 115884	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:32:55 PM	Prep Date: 6/19/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0122 0.00100 0.0125 0 98.0 85 115

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240619A

Sample ID: ICV-240619	Batch ID: R133652	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:10:14 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00386	0.000200	0.00400	0	96.5	90	110			

Sample ID: CCV1-240619	Batch ID: R133652	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 12:55:37 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	90	110			

Sample ID: CCV2-240619	Batch ID: R133652	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240619A	Analysis Date: 6/19/2024 1:09:18 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00200	0	102	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240606B

Sample ID: DCS3-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS3	Run ID: ICP-MS4_240606B	Analysis Date: 6/6/2024 9:54:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.00513	0.0100	0.00500	0	103	70	130	0	0	

Sample ID: DCS4-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS4	Run ID: ICP-MS4_240606B	Analysis Date: 6/6/2024 9:57:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0298	0.0300	0.0300	0	99.4	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240621A

The QC data in batch 115905 applies to the following samples: 2406180-01A, 2406180-02A, 2406180-03A, 2406180-04A, 2406180-05A, 2406180-06A

Sample ID: MB-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:21:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	<0.0100	0.0300
Lithium	<0.00500	0.0100

Sample ID: LCS-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: LCS	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:25:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.201	0.0300	0.200	0	100	80	120
Lithium	0.194	0.0100	0.200	0	97.2	80	120

Sample ID: LCSD-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:27:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.195	0.0300	0.200	0	97.7	80	120	2.70	15
Lithium	0.192	0.0100	0.200	0	95.8	80	120	1.49	15

Sample ID: 2406183-01C SD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:36:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.801	0.750	0	0.745				7.19	20
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Sample ID: 2406183-01C PDS	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:53:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	1.73	0.150	1.00	0.745	98.3	75	125
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Sample ID: 2406183-01C MS	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MS	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:56:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.981	0.150	0.200	0.745	118	75	125
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Sample ID: 2406183-01C MSD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:58:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240621A

Sample ID: 2406183-01C MSD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:58:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.952	0.150	0.200	0.745	104	75	125	3.00	15	

Sample ID: 2406183-01C SD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 11:10:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.0569	0.0500	0	0.0541				5.05	20	

Sample ID: 2406183-01C PDS		Batch ID: 115905		TestNo: SW6020B		Units: mg/L				
SampType: PDS		Run ID: ICP-MS4_240621A		Analysis Date: 6/21/2024 11:12:00 AM		Prep Date: 6/20/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.250	0.0100	0.200	0.0541	97.8	75	125			

Sample ID: 2406183-01C MS	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MS	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 11:14:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.248	0.0100	0.200	0.0541	96.8	75	125			

Sample ID: 2406183-01C MSD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 11:16:00 AM	Prep Date: 6/20/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.249	0.0100	0.200	0.0541	97.5	75	125	0.602	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240621A

Sample ID: ICV-240621	Batch ID: R133691	TestNo: SW6020B	Units: mg/L							
SampType: ICV	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:05:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0986	0.0300	0.100	0	98.6	90	110			
Lithium	0.0998	0.0100	0.100	0	99.8	90	110			

Sample ID: LCVL-240621	Batch ID: R133691	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 10:15:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0226	0.0300	0.0200	0	113	80	120			
Lithium	0.00992	0.0100	0.0100	0	99.2	80	120			

Sample ID: CCV1-240621	Batch ID: R133691	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 11:01:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.203	0.0300	0.200	0	102	90	110			
Lithium	0.198	0.0100	0.200	0	98.8	90	110			

Sample ID: CCV2-240621	Batch ID: R133691	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240621A	Analysis Date: 6/21/2024 11:20:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.197	0.0100	0.200	0	98.3	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240606A

Sample ID: DCS1-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L
SampType: DCS	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:16:00 AM	Prep Date: 6/5/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.000866	0.00250	0.00100	0	86.6	70	130	0	0	
Beryllium	0.000511	0.00100	0.000500	0	102	70	130	0	0	
Cadmium	0.000503	0.00100	0.000500	0	101	70	130	0	0	
Lead	0.000485	0.00100	0.000500	0	97.0	70	130	0	0	
Thallium	0.000538	0.00150	0.000500	0	108	70	130	0	0	

Sample ID: DCS2-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L
SampType: DCS2	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:20:00 AM	Prep Date: 6/5/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.301	0.300	0.300	0	100	70	130	0	0	

Sample ID: DCS3-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L
SampType: DCS3	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:22:00 AM	Prep Date: 6/5/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00487	0.00500	0.00500	0	97.4	70	130	0	0	
Barium	0.00503	0.0100	0.00500	0	101	70	130	0	0	
Chromium	0.00496	0.00500	0.00500	0	99.2	70	130	0	0	
Cobalt	0.00489	0.00500	0.00500	0	97.8	70	130	0	0	
Molybdenum	0.00496	0.00500	0.00500	0	99.3	70	130	0	0	
Selenium	0.00461	0.00500	0.00500	0	92.2	70	130	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

The QC data in batch 115905 applies to the following samples: 2406180-01A, 2406180-02A, 2406180-03A, 2406180-04A, 2406180-05A, 2406180-06A

Sample ID: MB-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: MBLK	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 1:32:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: LCS-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: LCS	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 1:35:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	80	120			
Arsenic	0.194	0.00500	0.200	0	97.2	80	120			
Barium	0.192	0.0100	0.200	0	96.2	80	120			
Beryllium	0.182	0.00100	0.200	0	91.2	80	120			
Cadmium	0.192	0.00100	0.200	0	95.8	80	120			
Calcium	4.45	0.300	5.00	0	88.9	80	120			
Chromium	0.194	0.00500	0.200	0	97.1	80	120			
Cobalt	0.199	0.00500	0.200	0	99.6	80	120			
Lead	0.192	0.00100	0.200	0	96.0	80	120			
Molybdenum	0.189	0.00500	0.200	0	94.5	80	120			
Selenium	0.195	0.00500	0.200	0	97.5	80	120			
Thallium	0.204	0.00150	0.200	0	102	80	120			

Sample ID: LCSD-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: LCSD	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 1:38:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.195	0.00250	0.200	0	97.5	80	120	1.26	15	
Arsenic	0.194	0.00500	0.200	0	96.9	80	120	0.301	15	
Barium	0.193	0.0100	0.200	0	96.6	80	120	0.465	15	
Beryllium	0.181	0.00100	0.200	0	90.7	80	120	0.512	15	
Cadmium	0.190	0.00100	0.200	0	95.2	80	120	0.704	15	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

Sample ID: LCSD-115905	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: LCSD	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 1:38:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.43	0.300	5.00	0	88.6	80	120	0.309	15	
Chromium	0.193	0.00500	0.200	0	96.4	80	120	0.711	15	
Cobalt	0.198	0.00500	0.200	0	99.0	80	120	0.614	15	
Lead	0.192	0.00100	0.200	0	95.8	80	120	0.147	15	
Molybdenum	0.188	0.00500	0.200	0	93.8	80	120	0.810	15	
Selenium	0.195	0.00500	0.200	0	97.5	80	120	0.022	15	
Thallium	0.199	0.00150	0.200	0	99.7	80	120	2.30	15	

Sample ID: 2406183-01C SD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: SD	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 1:45:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0				0	20	
Barium	0.0769	0.0500	0	0.0760				1.16	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	97.1	1.50	0	96.1				0.964	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Molybdenum	0.0146	0.0250	0	0.0146				0.349	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: 2406183-01C PDS	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: PDS	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 2:11:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.188	0.00250	0.200	0	94.1	75	125			
Arsenic	0.192	0.00500	0.200	0	96.0	75	125			
Barium	0.271	0.0100	0.200	0.0760	97.7	75	125			
Beryllium	0.183	0.00100	0.200	0	91.4	75	125			
Cadmium	0.192	0.00100	0.200	0	96.2	75	125			
Calcium	94.2	0.300	5.00	96.1	-38.5	75	125			S
Chromium	0.197	0.00500	0.200	0	98.6	75	125			
Cobalt	0.194	0.00500	0.200	0	96.8	75	125			
Lead	0.196	0.00100	0.200	0	97.9	75	125			
Molybdenum	0.203	0.00500	0.200	0.0146	94.0	75	125			
Selenium	0.186	0.00500	0.200	0	93.1	75	125			
Thallium	0.209	0.00150	0.200	0	105	75	125			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

Sample ID: 2406183-01C MS	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: MS	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 2:13:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	75	125			
Arsenic	0.191	0.00500	0.200	0	95.4	75	125			
Barium	0.271	0.0100	0.200	0.0760	97.4	75	125			
Beryllium	0.181	0.00100	0.200	0	90.3	75	125			
Cadmium	0.187	0.00100	0.200	0	93.6	75	125			
Calcium	100	0.300	5.00	96.1	85.7	75	125			
Chromium	0.194	0.00500	0.200	0	96.8	75	125			
Cobalt	0.191	0.00500	0.200	0	95.3	75	125			
Lead	0.193	0.00100	0.200	0	96.4	75	125			
Molybdenum	0.205	0.00500	0.200	0.0146	95.0	75	125			
Selenium	0.186	0.00500	0.200	0	93.2	75	125			
Thallium	0.204	0.00150	0.200	0	102	75	125			

Sample ID: 2406183-01C MSD	Batch ID: 115905	TestNo: SW6020B	Units: mg/L
SampType: MSD	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 2:16:00 PM	Prep Date: 6/20/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.195	0.00250	0.200	0	97.4	75	125	2.90	15	
Arsenic	0.193	0.00500	0.200	0	96.3	75	125	0.952	15	
Barium	0.271	0.0100	0.200	0.0760	97.4	75	125	0.037	15	
Beryllium	0.183	0.00100	0.200	0	91.4	75	125	1.26	15	
Cadmium	0.187	0.00100	0.200	0	93.7	75	125	0.088	15	
Calcium	101	0.300	5.00	96.1	93.4	75	125	0.383	15	
Chromium	0.195	0.00500	0.200	0	97.4	75	125	0.655	15	
Cobalt	0.194	0.00500	0.200	0	97.0	75	125	1.83	15	
Lead	0.195	0.00100	0.200	0	97.6	75	125	1.31	15	
Molybdenum	0.207	0.00500	0.200	0.0146	95.9	75	125	0.885	15	
Selenium	0.184	0.00500	0.200	0	92.1	75	125	1.12	15	
Thallium	0.203	0.00150	0.200	0	102	75	125	0.472	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

Sample ID: ICV-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: ICV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 9:46:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.0998	0.00250	0.100	0	99.8	90	110			
Arsenic	0.0986	0.00500	0.100	0	98.6	90	110			
Barium	0.0989	0.0100	0.100	0	98.9	90	110			
Beryllium	0.0960	0.00100	0.100	0	96.0	90	110			
Cadmium	0.0996	0.00100	0.100	0	99.6	90	110			
Calcium	2.38	0.300	2.50	0	95.0	90	110			
Chromium	0.100	0.00500	0.100	0	100	90	110			
Cobalt	0.101	0.00500	0.100	0	101	90	110			
Lead	0.0983	0.00100	0.100	0	98.3	90	110			
Molybdenum	0.0937	0.00500	0.100	0	93.7	90	110			
Selenium	0.103	0.00500	0.100	0	103	90	110			
Thallium	0.0964	0.00150	0.100	0	96.4	90	110			

Sample ID: LCVL-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 9:51:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00191	0.00250	0.00200	0	95.4	80	120			
Arsenic	0.00491	0.00500	0.00500	0	98.1	80	120			
Barium	0.00500	0.0100	0.00500	0	99.9	80	120			
Beryllium	0.000966	0.00100	0.00100	0	96.6	80	120			
Cadmium	0.00106	0.00100	0.00100	0	106	80	120			
Calcium	0.0963	0.300	0.100	0	96.3	80	120			
Chromium	0.00498	0.00500	0.00500	0	99.5	80	120			
Cobalt	0.00503	0.00500	0.00500	0	101	80	120			
Lead	0.000998	0.00100	0.00100	0	99.8	80	120			
Molybdenum	0.00492	0.00500	0.00500	0	98.4	80	120			
Selenium	0.00514	0.00500	0.00500	0	103	80	120			
Thallium	0.000981	0.00150	0.00100	0	98.1	80	120			

Sample ID: CCV2-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 11:12:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.5	90	110			
Arsenic	0.200	0.00500	0.200	0	99.8	90	110			
Barium	0.195	0.0100	0.200	0	97.4	90	110			
Beryllium	0.190	0.00100	0.200	0	95.1	90	110			
Cadmium	0.194	0.00100	0.200	0	97.2	90	110			
Calcium	4.69	0.300	5.00	0	93.8	90	110			
Chromium	0.195	0.00500	0.200	0	97.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

Sample ID: CCV2-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 11:12:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cobalt	0.203	0.00500	0.200	0	101	90	110			
Lead	0.194	0.00100	0.200	0	97.1	90	110			
Molybdenum	0.190	0.00500	0.200	0	95.1	90	110			
Selenium	0.201	0.00500	0.200	0	100	90	110			
Thallium	0.204	0.00150	0.200	0	102	90	110			

Sample ID: CCV3-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 2:18:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.6	90	110			
Arsenic	0.195	0.00500	0.200	0	97.5	90	110			
Barium	0.196	0.0100	0.200	0	97.8	90	110			
Beryllium	0.183	0.00100	0.200	0	91.6	90	110			
Cadmium	0.192	0.00100	0.200	0	96.1	90	110			
Calcium	4.51	0.300	5.00	0	90.2	90	110			
Chromium	0.196	0.00500	0.200	0	97.9	90	110			
Cobalt	0.200	0.00500	0.200	0	100	90	110			
Lead	0.192	0.00100	0.200	0	96.2	90	110			
Molybdenum	0.190	0.00500	0.200	0	94.9	90	110			
Selenium	0.197	0.00500	0.200	0	98.7	90	110			
Thallium	0.200	0.00150	0.200	0	99.8	90	110			

Sample ID: CCV4-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 2:47:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.6	90	110			
Arsenic	0.195	0.00500	0.200	0	97.3	90	110			
Barium	0.195	0.0100	0.200	0	97.3	90	110			
Beryllium	0.186	0.00100	0.200	0	92.8	90	110			
Cadmium	0.192	0.00100	0.200	0	96.1	90	110			
Calcium	4.54	0.300	5.00	0	90.8	90	110			
Chromium	0.194	0.00500	0.200	0	97.1	90	110			
Cobalt	0.201	0.00500	0.200	0	100	90	110			
Lead	0.193	0.00100	0.200	0	96.3	90	110			
Molybdenum	0.190	0.00500	0.200	0	95.1	90	110			
Selenium	0.199	0.00500	0.200	0	99.3	90	110			
Thallium	0.202	0.00150	0.200	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240620A

Sample ID: CCV5-240620	Batch ID: R133678	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240620A	Analysis Date: 6/20/2024 3:06:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.53	0.300	5.00	0	90.6	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240604A

Sample ID: DCS3-115659	Batch ID: 115659	TestNo: E300	Units: mg/L							
SampType: DCS3	Run ID: IC4_240604A	Analysis Date: 6/4/2024 12:05:12 PM	Prep Date: 6/4/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.846	1.00	1.000	0	84.6	70	130	0	0	
Fluoride	0.332	0.400	0.4000	0	83.0	70	130	0	0	
Sulfate	2.48	3.00	3.000	0	82.6	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240621B

The QC data in batch 115941 applies to the following samples: 2406180-01B, 2406180-02B, 2406180-04B, 2406180-05B, 2406180-06B

Sample ID: MB-115941	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC4_240621B	Analysis Date: 6/21/2024 2:05:21 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID: LCS-115941	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC4_240621B	Analysis Date: 6/21/2024 2:24:21 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.57	1.00	10.00	0	95.7	90	110
Fluoride	3.86	0.400	4.000	0	96.4	90	110
Sulfate	29.7	3.00	30.00	0	98.9	90	110

Sample ID: LCSD-115941	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC4_240621B	Analysis Date: 6/21/2024 2:43:21 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	8.64	1.00	10.00	0	86.4	90	110	10.3	20	S
Fluoride	3.50	0.400	4.000	0	87.4	90	110	9.78	20	S
Sulfate	26.5	3.00	30.00	0	88.4	90	110	11.2	20	S

Sample ID: 2406133-03FMS	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC4_240621B	Analysis Date: 6/21/2024 7:06:47 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	29700	1000	20000	10200	97.7	90	110
Fluoride	20000	400	20000	0	99.8	90	110
Sulfate	21800	3000	20000	2363	97.0	90	110

Sample ID: 2406133-03FMSD	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC4_240621B	Analysis Date: 6/21/2024 7:25:47 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	29500	1000	20000	10200	96.3	90	110	0.946	20
Fluoride	20000	400	20000	0	100	90	110	0.176	20
Sulfate	21700	3000	20000	2363	96.6	90	110	0.419	20

Sample ID: 2406180-01BMS	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC4_240621B	Analysis Date: 6/21/2024 11:32:47 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240621B

Sample ID: 2406180-01BMS	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC4_240621B	Analysis Date: 6/21/2024 11:32:47 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	250	10.0	200.0	48.37	101	90	110			
Fluoride	182	4.00	200.0	0	91.1	90	110			
Sulfate	329	30.0	200.0	137.3	96.1	90	110			

Sample ID: 2406180-01BMSD	Batch ID: 115941	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC4_240621B	Analysis Date: 6/21/2024 11:51:47 PM	Prep Date: 6/21/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	251	10.0	200.0	48.37	101	90	110	0.127	20	
Fluoride	183	4.00	200.0	0	91.5	90	110	0.473	20	
Sulfate	330	30.0	200.0	137.3	96.1	90	110	0.041	20	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240621B

Sample ID: ICV-240621	Batch ID: R133702	TestNo: E300				Units: mg/L				
SampType: ICV	Run ID: IC4_240621B	Analysis Date: 6/21/2024 12:40:21 PM				Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.1	1.00	25.00	0	104	90	110			
Fluoride	10.2	0.400	10.00	0	102	90	110			
Sulfate	77.5	3.00	75.00	0	103	90	110			

Sample ID: CCV1-240621	Batch ID: R133702	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC4_240621B	Analysis Date: 6/21/2024 9:00:47 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.72	1.00	10.00	0	97.2	90	110			
Fluoride	3.94	0.400	4.000	0	98.6	90	110			
Sulfate	30.0	3.00	30.00	0	100	90	110			

Sample ID: CCV2-240621	Batch ID: R133702	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC4_240621B	Analysis Date: 6/22/2024 2:04:47 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.27	1.00	10.00	0	92.7	90	110			
Fluoride	3.77	0.400	4.000	0	94.3	90	110			
Sulfate	28.6	3.00	30.00	0	95.4	90	110			

Sample ID: CCV3-240621	Batch ID: R133702	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC4_240621B	Analysis Date: 6/22/2024 6:30:47 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.82	1.00	10.00	0	98.2	90	110			
Fluoride	3.99	0.400	4.000	0	99.8	90	110			
Sulfate	30.0	3.00	30.00	0	100	90	110			

Sample ID: CCV4-240621	Batch ID: R133702	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC4_240621B	Analysis Date: 6/22/2024 10:37:47 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.68	1.00	10.00	0	96.8	90	110			
Fluoride	3.95	0.400	4.000	0	98.7	90	110			
Sulfate	29.6	3.00	30.00	0	98.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering

Work Order: 2406180

Project: VISTRA-MLSES-A1 LANDFILL CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240619A

The QC data in batch 115874 applies to the following samples: 2406180-01B, 2406180-02B, 2406180-04B, 2406180-05B, 2406180-06B

Sample ID: MB-115874	Batch ID: 115874	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_240619A	Analysis Date: 6/18/2024 3:55:00 PM	Prep Date: 6/18/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID: LCS-115874	Batch ID: 115874	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_240619A	Analysis Date: 6/18/2024 3:55:00 PM	Prep Date: 6/18/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 758 10.0 745.6 0 102 90 113

Sample ID: 2406180-01B-DUP	Batch ID: 115874	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240619A	Analysis Date: 6/18/2024 3:55:00 PM	Prep Date: 6/18/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 840 50.0 0 865.0 2.93 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2406180
Project: VISTRA-MLSES-A1 LANDFILL CCR

SQL SUMMARY REPORT

TestNo: E300	MDL	SQL
Analyte	mg/L	mg/L
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	MDL	SQL
Analyte	mg/L	mg/L
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

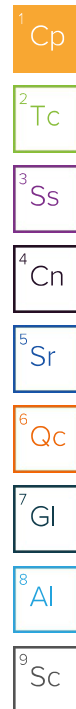
TestNo: SW7470A	MDL	SQL
Analyte	mg/L	mg/L
Mercury	0.0000800	0.000200

TestNo: M2540C	MDL	SQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0



ANALYTICAL REPORT

July 11, 2024



DHL Analytical, Inc.

Sample Delivery Group: L1748511
Samples Received: 06/19/2024
Project Number: 2406180
Description:

Report To: John DuPont
2300 Double Creek Drive
Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

BMW-33 L1748511-01 Non-Potable Water

Collected by
Collected date/time
Received date/time

06/13/24 08:50 06/19/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309149	1	06/21/24 21:36	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2309111	1	06/21/24 15:54	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2309111	1	06/21/24 15:54	06/25/24 17:42	ZRG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

BMW-20 L1748511-02 Non-Potable Water

Collected by
Collected date/time
Received date/time

06/13/24 09:55 06/19/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309149	1	06/21/24 21:36	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2309111	1	06/21/24 15:54	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2309111	1	06/21/24 15:54	06/25/24 17:42	ZRG	Mt. Juliet, TN

BMW-19 L1748511-03 Non-Potable Water

Collected by
Collected date/time
Received date/time

06/13/24 11:35 06/19/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309149	1	06/21/24 21:36	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2309111	1	06/21/24 15:54	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2309111	1	06/21/24 15:54	06/25/24 17:42	ZRG	Mt. Juliet, TN

BMW-18 L1748511-04 Non-Potable Water

Collected by
Collected date/time
Received date/time

06/13/24 12:30 06/19/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309149	1	06/21/24 21:36	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2310839	1	06/24/24 14:24	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN

BMW-28 L1748511-05 Non-Potable Water

Collected by
Collected date/time
Received date/time

06/13/24 13:20 06/19/24 10:30

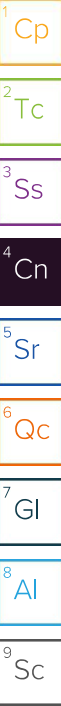
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309149	1	06/21/24 21:36	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2310839	1	06/24/24 14:24	07/05/24 17:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Donna Eidson
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.116	U	0.255	0.359	0.449	0.236	07/05/2024 17:29	WG2309149
(T) Barium	90.0					30.0-143	07/05/2024 17:29	WG2309149
(T) Yttrium	101					30.0-136	07/05/2024 17:29	WG2309149

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.324	J	0.320	0.492	07/05/2024 17:29	WG2309111

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.208		0.194	0.325	0.200	0.165	06/25/2024 17:42	WG2309111
(T) Barium-133	88.8					30.0-143	06/25/2024 17:42	WG2309111

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.342	U	0.282	0.390	0.510	0.267	07/05/2024 17:29	WG2309149
(T) Barium	94.1					30.0-143	07/05/2024 17:29	WG2309149
(T) Yttrium	89.6					30.0-136	07/05/2024 17:29	WG2309149

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.276	J	0.380	0.593	07/05/2024 17:29	WG2309111

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.276	J	0.255	0.383	0.303	0.221	06/25/2024 17:42	WG2309111
(T) Barium-133	85.2					30.0-143	06/25/2024 17:42	WG2309111

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0358	<u>U</u>	0.303	0.404	0.531	0.277	07/05/2024 17:29	WG2309149
(T) Barium	95.3					30.0-143	07/05/2024 17:29	WG2309149
(T) Yttrium	102					30.0-136	07/05/2024 17:29	WG2309149

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0358	<u>U</u>	0.340	0.644	07/05/2024 17:29	WG2309111

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	-0.0726	<u>U</u>	0.154	0.289	0.364	0.243	06/25/2024 17:42	WG2309111
(T) Barium-133	84.3					30.0-143	06/25/2024 17:42	WG2309111

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.0596	U	0.251	0.354	0.443	0.233	07/05/2024 17:29	WG2309149
(T) Barium	103					30.0-143	07/05/2024 17:29	WG2309149
(T) Yttrium	93.2					30.0-136	07/05/2024 17:29	WG2309149

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.481	J	0.351	0.485	07/05/2024 17:29	WG2310839

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.422		0.246	0.120	0.197	0.150	06/25/2024 22:46	WG2310839
(T) Barium-133	96.2					30.0-143	06/25/2024 22:46	WG2310839

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.429	J	0.329	0.439	0.568	0.297	07/05/2024 17:29	WG2309149
(T) Barium	84.6					30.0-143	07/05/2024 17:29	WG2309149
(T) Yttrium	96.9					30.0-136	07/05/2024 17:29	WG2309149

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.06		0.502	0.689	07/05/2024 17:29	WG2310839

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.633		0.379	0.166	0.390	0.259	06/25/2024 22:46	WG2310839
(T) Barium-133	90.4					30.0-143	06/25/2024 22:46	WG2310839

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4091735-1 07/05/24 17:29

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.466		0.216	0.368	0.192
(T) Barium	90.3		90.3		
(T) Yttrium	106		106		

L1748044-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748044-01 07/05/24 17:29 • (DUP) R4091735-5 07/05/24 17:29

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.604	0.409	0.708	0.373	0.215	0.297	0.522	0.276	94.9	0.769	U	20	3
(T) Barium	105				98.0	98.0							
(T) Yttrium	73.3				108	108							

Laboratory Control Sample (LCS)

(LCS) R4091735-2 07/05/24 17:29

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.91	98.2	80.0-120	
(T) Barium			97.1		
(T) Yttrium			87.5		

L1748527-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748527-01 07/05/24 17:29 • (MS) R4091735-3 07/05/24 17:29 • (MSD) R4091735-4 07/05/24 17:29

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	-0.432	17.7	16.3	106	97.4	1	70.0-130			8.59		20
(T) Barium		116			106	107							
(T) Yttrium		96.0			104	103							

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4087337-1 06/25/24 17:41

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.0166	<u>U</u>	0.0386	0.0915	0.0614
(T) Barium-133	83.6		83.6		

L1748511-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1748511-03 06/25/24 17:42 • (DUP) R4087337-5 06/25/24 17:41

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	-0.0726	0.154	0.364	0.243	-0.0164	0.233	0.433	0.278	0.000	0.201	<u>U</u>	20	3
(T) Barium-133	84.3				82.8	82.8							

Laboratory Control Sample (LCS)

(LCS) R4087337-2 06/25/24 17:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.11	102	75.0-125	
(T) Barium-133			82.2		

L1747363-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1747363-03 06/25/24 17:41 • (MS) R4087337-3 06/25/24 17:41 • (MSD) R4087337-4 06/25/24 17:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	1.06	19.7	20.2	93.4	95.4	1	75.0-125			2.06		20
(T) Barium-133		86.2			81.4	81.8							



Method Blank (MB)

(MB) R4087378-1 06/25/24 22:46

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0320	J	0.0378	0.0565	0.0347
(T) Barium-133	81.5		81.5		

L1748641-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748641-01 06/25/24 22:46 • (DUP) R4087378-5 06/25/24 22:46

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0947	0.166	0.264	0.187	0.187	0.292	0.429	0.276	65.5	0.275	J	20	3
(T) Barium-133	90.5				83.5	83.5							

Laboratory Control Sample (LCS)

(LCS) R4087378-2 06/25/24 22:46

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.32	106	75.0-125	
(T) Barium-133			90.5		

L1749015-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749015-03 06/25/24 22:46 • (MS) R4087378-3 06/25/24 22:46 • (MSD) R4087378-4 06/25/24 22:46

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.177	19.4	21.6	96.1	107	1	75.0-125			10.7		20
(T) Barium-133		88.1			91.7	74.2							



GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

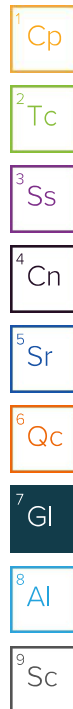
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

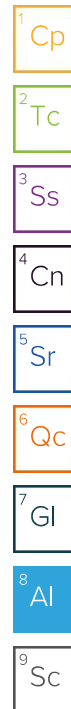
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX:

Work Order: 2406180

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

TEL: (615) 773-5923

FAX:

Acct #: DHLRRTX

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

C147

U748511
17-Jun-24

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests			
					Ra-228	Ra-226		
					E904.0	M7500 Ra B M		
BMW-33	Aqueous	01C	06/13/24 08:50 AM	1LHDPEHNO3		1		J-01
BMW-33	Aqueous	01D	06/13/24 08:50 AM	1LHDPEHNO3	1			
BMW-20	Aqueous	02C	06/13/24 09:55 AM	1LHDPEHNO3		1		J-02
BMW-20	Aqueous	02D	06/13/24 09:55 AM	1LHDPEHNO3	1			
BMW-19	Aqueous	04C	06/13/24 11:35 AM	1LHDPEHNO3		1		J-03
BMW-19	Aqueous	04D	06/13/24 11:35 AM	1LHDPEHNO3	1			
BMW-18	Aqueous	05C	06/13/24 12:30 PM	1LHDPEHNO3		1		J-04
BMW-18	Aqueous	05D	06/13/24 12:30 PM	1LHDPEHNO3	1			
BMW-28	Aqueous	06C	06/13/24 01:20 PM	1LHDPEHNO3		1		J-05
BMW-28	Aqueous	06D	06/13/24 01:20 PM	1LHDPEHNO3	1			

12 970 R40 03 3714 4241

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RA Screen <0.5 mR/hr: ☒ Y ☐ N EDAG Amb

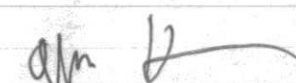
General Comments:

Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Date/Time

Relinquished by: 

6/17/24 1700

Received by: 

Date/Time

6/19/24 1030

Relinquished by:

Received by:



September 13, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:
RE: A1 Landfill - CCR

Order No.: 2408112

Dear Will Vienne:

DHL Analytical, Inc. received 14 sample(s) on 8/9/2024 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211 - TX-C24-00120



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2300 Double Creek Dr. Round Rock, TX 78664

Phone 512.388.8222

Web: www.dhlanalytical.comEmail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

PAGE 1 OF 1

CLIENT: BBA		DATE: 8-8-24		LAB USE ONLY	
ADDRESS: 165 N. CAMPASAS ST. BEAUM, TX		PO#: 23643V-17		DHL WORKORDER #: 24080-112 SM 08/09/24	
PHONE: _____ EMAIL: _____		PROJECT LOCATION OR NAME: A1 LANDFILL-CCR			
DATA REPORTED TO: WILL VIENNE		CLIENT PROJECT # 23643V-17 COLLECTOR: JOHN BRAYTON			
ADDITIONAL REPORT COPIES TO: _____					
Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No					
Field Sample I.D.					
Lab Use Only					
DHL Lab #					
W=WATER L=LIQUID S=SOIL SO=SOLID					
SE=SEDIMENT P=PAINT SL=SLUDGE					
PRESERVATION					
# of Containers					
HCL ☐ H₃PO₄ ☐					
HNO₃ ☐					
H₂SO₄ ☐					
NaOH ☐ Zn Acetate ☐					
ICE ☒ UNPRESERVED ☒					
ANALYSES					
BTEX ☐ MTBE ☐ [METHOD 8260]					
TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐					
GRO 8015 ☐ DRO 8015 ☐					
VOC 8260 ☐ VOC 624.1 ☐					
SVOC 8270 ☐ SVOC 625.1 ☐					
PAH 8270 ☐ HOLD PAH ☐					
PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐					
PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐					
HERB 8321 ☐ T PHOS ☐ AMMONIA ☐					
METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐					
RCRA 8 ☐ TX11 ☐					
pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐					
ANIONS 300 ☐ 9056 ☐					
TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐					
TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐					
RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐					
TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐					
APPENDIX III					
APPENDIX IV					
COBALT ONLY					
FIELD NOTES					

Relinquished By: (Sign)	DATE/TIME	Received by:	TURN AROUND TIME (CALL FIRST FOR RUSH)	LAB USE ONLY
	8-8-24 1700	Fecky	RUSH-1 DAY ☐ RUSH-2 DAY ☐	3.20°C, 1.9°C THERMO #: 78
Relinquished By: (Sign)	DATE/TIME	Received by:	RUSH-3 DAY ☐	RECEIVING TEMP (°C): 1.9°C, 2.2°C
	8/9/24 0907	Vienn	NORMAL ☐ OTHER ☐	IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
Relinquished By: (Sign)	DATE/TIME	Received by:	DUE DATE ☐	CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☒ INTACT ☐ NOT USED
				CARRIER: ☐ LSO ☒ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ DHL DISPOSAL @ \$10.00 each

Eric Lau

From: John DuPont
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
Subject: FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)

Anions (Cl, F, and SO₄)

TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)

Ra-226

Ra-228

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 08AUG24
ACTWGT: 35.00 LB
CAD: 113203857/INET4535
DIMS: 25x14x14 IN

BILL SENDER

TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222

REF:

INV:

PO: 23643V-17

DEPT:



FedEx
Express



FRI - 09 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 7778 7069 1363
0201

44 BSMA

78664

TX-US AUS



512

1
10:30

C

1363
08.09

CUSTODY SEAL

DATE

8.8.24

SIGNATURE

[Signature]

DHL
ANALYTICAL

eri

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 08AUG24
ACTWGT: 35.00 LB
CAD: 113203857/INET4535
DIMS: 25x14x14 IN
BILL SENDER

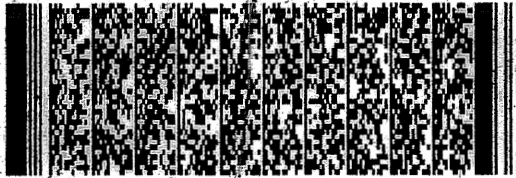
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DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222
INV:
PO: 23843V-17

REF:

DEPT:



FedEx
Express



583J6A12D9AE3

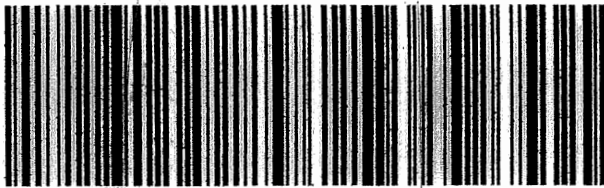
FRI - 09 AUG 10:30A
PRIORITY OVERNIGHT

TRK#
0201 7778 7091 7682

44 BSMA

78664

TX-US AUS



BBA Engineering



CUSTODY SEAL

DATE

8-8-24

SIGNATURE

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 08AUG24
ACTWGT: 35.00 LB
CAD: 113203857/INET4535
DIMS: 25x14x14 IN

BILL SENDER

TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222

REF:

INV:

PO: 23643V-17

DEPT:



FedEx
Express



583UGIA12D9AE3

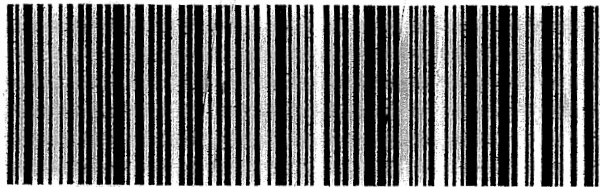
FRI - 09 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 7778 7081 8940
0201

44 BSMA

78664

TX-US AUS



RT 512
FZ
1
10:30
8940
08.09
C

DHL
ANALYTICAL

CUSTODY SEAL

DATE

8-8-24

SIGNATURE

[Signature]

BBA Engineer

10

ORIGIN ID:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 08AUG24
ACTWGT: 35.00 LB
CAD: 113203857/INET4535
DIMS: 24x14x14 IN

BILL SENDER

LOGIN

HL ANALYTICAL
300 DOUBLE CREEK DR

ROUND ROCK TX 78664

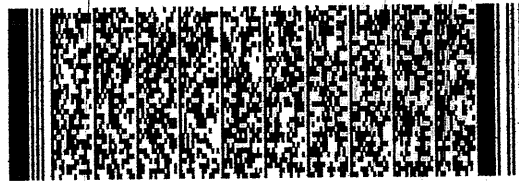
(512) 388-8222

REF:

INV:

PO: 23643V-17

DEPT:



FedEx
Express



J243020713010v

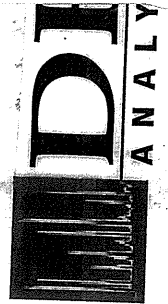
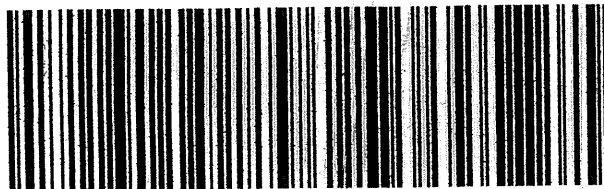
FRI - 09 AUG 10:30A
PRIORITY OVERNIGHT

TRK# 7778 7058 4748
0201

44 BSMA

78664

TX-US AUS



CUSTODY SEAL

DATE

8-9-24

SIGNATURE

ON
CA

Sample Receipt Checklist

Client Name: BBA Engineering

Date Received: 8/9/2024

Work Order Number: 2408112

Received by: KAO

Checklist completed by: [Signature] 8/9/2024
Signature Date

Reviewed by: SH 8/9/2024
Initials Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 13171
	Adjusted? <u>NO</u>	Checked by <u>SM</u>	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Cooler #	1	2	3	4
Temp °C	1.9	2.2	3.2	1.9
Seal Intact	Y	Y	Y	Y

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Laboratory Name: DHL Analytical, Inc.								
Laboratory Review Checklist: Reportable Data								
Project Name: A1 Landfill - CCR				LRC Date: 9/13/24				
Reviewer Name: Carlos Castro				Laboratory Work Order: 2408112				
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵	
R1	OI	Chain-of-Custody (C-O-C)						
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X					R1-01
		2) Were all departures from standard conditions described in an exception report?			X			
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X					
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X					
R3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?	X					
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X					
		3) Were calculations checked by a peer or supervisor?	X					
		4) Were all analyte identifications checked by a peer or supervisor?	X					
		5) Were sample detection limits reported for all analytes not detected?	X					
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X			
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X			
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X			
		9) If required for the project, TICs reported?			X			
R4	O	Surrogate Recovery Data						
		1) Were surrogates added prior to extraction?			X			
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X			
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?	X					
		2) Were blanks analyzed at the appropriate frequency?	X					
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X					
		4) Were blank concentrations < MDL?	X					
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?			X			
R6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?	X					
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X					
		3) Were LCSs analyzed at the required frequency?	X					
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X					
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X					
		6) Was the LCSD RPD within QC limits (if applicable)?	X					
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS and MSD?	X					
		2) Were MS/MSD analyzed at the appropriate frequency?	X					
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-03	
		4) Were MS/MSD RPDs within laboratory QC limits?	X					
R8	OI	Analytical Duplicate Data						
		1) Were appropriate analytical duplicates analyzed for each matrix?	X					
		2) Were analytical duplicates analyzed at the appropriate frequency?	X					
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X					
R9	OI	Method Quantitation Limits (MQLs):						
		1) Are the MQLs for each method analyte included in the laboratory data package?	X					
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X					
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X					
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X					
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X					
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X					

Laboratory Name: DHL Analytical, Inc.							
Laboratory Review Checklist (continued): Supporting Data							
Project Name: A1 Landfill - CCR				LRC Date: 9/13/24			
Reviewer Name: Carlos Castro				Laboratory Work Order: 2408112			
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw Data (NELAC Section 5.5.10)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	X				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) The amount of analyte measured in the duplicate,
 - b) The calculated RPD, and
 - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager


Signature

09/13/24
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Lab Order: 2408112

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M.
Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 8/9/24. A total of 14 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 8/10/24 the matrix spikes and matrix spike duplicate recoveries (2408112-01 MS/MSD & 2408112-11 MS/MSD) were below control limits for up to three analytes. This was due to matrix effect. These are flagged accordingly in the QC summary report. The samples selected for the matrix spikes and matrix spike duplicates (2408112-01 MS/MSD & 2408112-11 MS/MSD) were from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

For Metals analysis performed on 8/20/24 the matrix spike and matrix spike duplicate recoveries were above control limits for Boron and/or Calcium. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Lab Order: 2408112**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2408112-01	BMW-24		08/07/24 08:05 AM	08/09/2024
2408112-02	BMW-23		08/07/24 09:00 AM	08/09/2024
2408112-03	BMW-22		08/07/24 09:55 AM	08/09/2024
2408112-04	BMW-21		08/07/24 10:45 AM	08/09/2024
2408112-05	BMW-20		08/07/24 11:40 AM	08/09/2024
2408112-06	BMW-27		08/07/24 01:05 PM	08/09/2024
2408112-07	BMW-26		08/07/24 02:00 PM	08/09/2024
2408112-08	BMW-11AR		08/07/24 03:10 PM	08/09/2024
2408112-09	BMW-19		08/07/24 04:05 PM	08/09/2024
2408112-10	BMW-18		08/08/24 08:10 AM	08/09/2024
2408112-11	BMW-28		08/08/24 09:10 AM	08/09/2024
2408112-12	DUP-1		08/08/24 09:10 AM	08/09/2024
2408112-13	BMW-33		08/08/24 10:10 AM	08/09/2024
2408112-14	BMW-32		08/08/24 11:05 AM	08/09/2024

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2408112-01A	BMW-24	08/07/24 08:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-24	08/07/24 08:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-24	08/07/24 08:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-24	08/07/24 08:05 AM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-01B	BMW-24	08/07/24 08:05 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-24	08/07/24 08:05 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-24	08/07/24 08:05 AM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-02A	BMW-23	08/07/24 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-23	08/07/24 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-23	08/07/24 09:00 AM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-02B	BMW-23	08/07/24 09:00 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-23	08/07/24 09:00 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-23	08/07/24 09:00 AM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-03A	BMW-22	08/07/24 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-22	08/07/24 09:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-22	08/07/24 09:55 AM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-03B	BMW-22	08/07/24 09:55 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-22	08/07/24 09:55 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-22	08/07/24 09:55 AM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-04A	BMW-21	08/07/24 10:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-21	08/07/24 10:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-21	08/07/24 10:45 AM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-04B	BMW-21	08/07/24 10:45 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-21	08/07/24 10:45 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-21	08/07/24 10:45 AM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-05A	BMW-20	08/07/24 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-20	08/07/24 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-20	08/07/24 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2408112-05A	BMW-20	08/07/24 11:40 AM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-05B	BMW-20	08/07/24 11:40 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-20	08/07/24 11:40 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-20	08/07/24 11:40 AM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-06A	BMW-27	08/07/24 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-27	08/07/24 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-27	08/07/24 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
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	BMW-27	08/07/24 01:05 PM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-07A	BMW-26	08/07/24 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-26	08/07/24 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-26	08/07/24 02:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-26	08/07/24 02:00 PM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-07B	BMW-26	08/07/24 02:00 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-26	08/07/24 02:00 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
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2408112-08A	BMW-11AR	08/07/24 03:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
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	BMW-11AR	08/07/24 03:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-11AR	08/07/24 03:10 PM	Aqueous	SW7470A	Mercury Aq Prep	08/09/24 12:14 PM	116645
2408112-08B	BMW-11AR	08/07/24 03:10 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-11AR	08/07/24 03:10 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-11AR	08/07/24 03:10 PM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-09A	BMW-19	08/07/24 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-19	08/07/24 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-19	08/07/24 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
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2408112-09B	BMW-19	08/07/24 04:05 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-19	08/07/24 04:05 PM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-19	08/07/24 04:05 PM	Aqueous	M2540C	TDS Preparation	08/13/24 11:04 AM	116708
2408112-10A	BMW-18	08/08/24 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-18	08/08/24 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-18	08/08/24 08:10 AM	Aqueous	SW7470A	Mercury Aq Prep	08/13/24 02:00 PM	116712
2408112-10B	BMW-18	08/08/24 08:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-18	08/08/24 08:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-18	08/08/24 08:10 AM	Aqueous	M2540C	TDS Preparation	08/14/24 02:09 PM	116734
2408112-11A	BMW-28	08/08/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-28	08/08/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-28	08/08/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-28	08/08/24 09:10 AM	Aqueous	SW7470A	Mercury Aq Prep	08/15/24 01:29 PM	116755
2408112-11B	BMW-28	08/08/24 09:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-28	08/08/24 09:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-28	08/08/24 09:10 AM	Aqueous	M2540C	TDS Preparation	08/14/24 02:09 PM	116734
2408112-12A	DUP-1	08/08/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	DUP-1	08/08/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	DUP-1	08/08/24 09:10 AM	Aqueous	SW7470A	Mercury Aq Prep	08/15/24 01:29 PM	116755
2408112-12B	DUP-1	08/08/24 09:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	DUP-1	08/08/24 09:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	DUP-1	08/08/24 09:10 AM	Aqueous	M2540C	TDS Preparation	08/14/24 02:09 PM	116734
2408112-13A	BMW-33	08/08/24 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-33	08/08/24 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-33	08/08/24 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740
	BMW-33	08/08/24 10:10 AM	Aqueous	SW7470A	Mercury Aq Prep	08/15/24 01:29 PM	116755
2408112-13B	BMW-33	08/08/24 10:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2408112-13B	BMW-33	08/08/24 10:10 AM	Aqueous	E300	Anion Preparation	08/10/24 01:00 PM	116669
	BMW-33	08/08/24 10:10 AM	Aqueous	M2540C	TDS Preparation	08/14/24 02:09 PM	116734
2408112-14A	BMW-32	08/08/24 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/15/24 07:19 AM	116740

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408112-01A	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:43 AM	CETAC2_HG_240812 B
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:08 AM	ICP-MS4_240820A
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:21 PM	ICP-MS5_240816B
	BMW-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:28 PM	ICP-MS5_240816B
2408112-01B	BMW-24	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 05:59 PM	IC4_240810A
	BMW-24	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 12:38 AM	IC4_240810A
	BMW-24	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-02A	BMW-23	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:46 AM	CETAC2_HG_240812 B
	BMW-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:23 PM	ICP-MS5_240816B
	BMW-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/20/24 10:10 AM	ICP-MS4_240820A
2408112-02B	BMW-23	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 06:56 PM	IC4_240810A
	BMW-23	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 12:57 AM	IC4_240810A
	BMW-23	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-03A	BMW-22	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:48 AM	CETAC2_HG_240812 B
	BMW-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/20/24 10:12 AM	ICP-MS4_240820A
	BMW-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:26 PM	ICP-MS5_240816B
2408112-03B	BMW-22	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 07:15 PM	IC4_240810A
	BMW-22	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 01:16 AM	IC4_240810A
	BMW-22	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-04A	BMW-21	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:50 AM	CETAC2_HG_240812 B
	BMW-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/20/24 10:00 AM	ICP-MS4_240820A
	BMW-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:11 PM	ICP-MS5_240816B
2408112-04B	BMW-21	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 07:34 PM	IC4_240810A
	BMW-21	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 01:35 AM	IC4_240810A
	BMW-21	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-05A	BMW-20	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:52 AM	CETAC2_HG_240812 B

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408112-05A	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:14 AM	ICP-MS4_240820A
	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:28 PM	ICP-MS5_240816B
	BMW-20	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:30 PM	ICP-MS5_240816B
2408112-05B	BMW-20	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 07:53 PM	IC4_240810A
	BMW-20	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 01:54 AM	IC4_240810A
	BMW-20	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-06A	BMW-27	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:55 AM	CETAC2_HG_240812 B
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:31 PM	ICP-MS5_240816B
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:33 PM	ICP-MS5_240816B
	BMW-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:15 AM	ICP-MS4_240820A
2408112-06B	BMW-27	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 08:12 PM	IC4_240810A
	BMW-27	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 02:13 AM	IC4_240810A
	BMW-27	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-07A	BMW-26	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:57 AM	CETAC2_HG_240812 B
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:36 PM	ICP-MS5_240816B
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:17 AM	ICP-MS4_240820A
	BMW-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:34 PM	ICP-MS5_240816B
2408112-07B	BMW-26	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 08:31 PM	IC4_240810A
	BMW-26	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 02:32 AM	IC4_240810A
	BMW-26	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-08A	BMW-11AR	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 10:59 AM	CETAC2_HG_240812 B
	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:19 AM	ICP-MS4_240820A
	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:36 PM	ICP-MS5_240816B
	BMW-11AR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:38 PM	ICP-MS5_240816B
2408112-08B	BMW-11AR	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 08:50 PM	IC4_240810A
	BMW-11AR	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 04:07 AM	IC4_240810A

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408112-08B	BMW-11AR	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-09A	BMW-19	Aqueous	SW7470A	Mercury Total: Aqueous	116645	1	08/12/24 11:02 AM	CETAC2_HG_240812B
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	20	08/16/24 02:41 PM	ICP-MS5_240816B
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:21 AM	ICP-MS4_240820A
	BMW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 01:58 PM	ICP-MS5_240816B
2408112-09B	BMW-19	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 09:09 PM	IC4_240810A
	BMW-19	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 04:26 AM	IC4_240810A
	BMW-19	Aqueous	M2540C	Total Dissolved Solids	116708	1	08/13/24 01:15 PM	WC_240813C
2408112-10A	BMW-18	Aqueous	SW7470A	Mercury Total: Aqueous	116712	1	08/14/24 12:31 PM	CETAC2_HG_240814A
	BMW-18	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:23 AM	ICP-MS4_240820A
	BMW-18	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 02:00 PM	ICP-MS5_240816B
2408112-10B	BMW-18	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 04:45 AM	IC4_240810A
	BMW-18	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 09:28 PM	IC4_240810A
	BMW-18	Aqueous	M2540C	Total Dissolved Solids	116734	1	08/14/24 04:40 PM	WC_240814B
2408112-11A	BMW-28	Aqueous	SW7470A	Mercury Total: Aqueous	116755	1	08/16/24 09:21 AM	CETAC2_HG_240816A
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:42 AM	ICP-MS4_240820A
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 02:03 PM	ICP-MS5_240816B
	BMW-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	5	08/16/24 02:43 PM	ICP-MS5_240816B
2408112-11B	BMW-28	Aqueous	E300	Anions by IC method - Water	116669	10	08/10/24 11:03 PM	IC4_240810A
	BMW-28	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 05:04 AM	IC4_240810A
	BMW-28	Aqueous	M2540C	Total Dissolved Solids	116734	1	08/14/24 04:40 PM	WC_240814B
2408112-12A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	116755	1	08/16/24 09:32 AM	CETAC2_HG_240816A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 02:06 PM	ICP-MS5_240816B
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:44 AM	ICP-MS4_240820A
2408112-12B	DUP-1	Aqueous	E300	Anions by IC method - Water	116669	10	08/11/24	IC4_240810A
	DUP-1	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 05:23 AM	IC4_240810A

Lab Order: 2408112
Client: BBA Engineering
Project: A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408112-12B	DUP-1	Aqueous	M2540C	Total Dissolved Solids	116734	1	08/14/24 04:40 PM	WC_240814B
2408112-13A	BMW-33	Aqueous	SW7470A	Mercury Total: Aqueous	116755	1	08/16/24 09:35 AM	CETAC2_HG_240816 A
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/20/24 10:46 AM	ICP-MS4_240820A
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 02:08 PM	ICP-MS5_240816B
	BMW-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	10	08/16/24 02:46 PM	ICP-MS5_240816B
2408112-13B	BMW-33	Aqueous	E300	Anions by IC method - Water	116669	10	08/11/24 12:19 AM	IC4_240810A
	BMW-33	Aqueous	E300	Anions by IC method - Water	116669	1	08/11/24 05:42 AM	IC4_240810A
	BMW-33	Aqueous	M2540C	Total Dissolved Solids	116734	1	08/14/24 04:40 PM	WC_240814B
2408112-14A	BMW-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116740	1	08/16/24 02:11 PM	ICP-MS5_240816B

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-24
Lab ID: 2408112-01
Collection Date: 08/07/24 08:05 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:21 PM
Barium	0.752	0.00300	0.0100		mg/L	1	08/16/24 01:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:21 PM
Boron	0.415	0.0100	0.0300		mg/L	1	08/20/24 10:08 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:21 PM
Calcium	74.8	1.00	3.00		mg/L	10	08/16/24 02:28 PM
Chromium	0.0130	0.00200	0.00500		mg/L	1	08/16/24 01:21 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:21 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:21 PM
Lithium	0.0266	0.00500	0.0100		mg/L	1	08/16/24 01:21 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:21 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:21 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:43 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	342	3.00	10.0		mg/L	10	08/10/24 05:59 PM
Fluoride	0.358	0.100	0.400	J	mg/L	1	08/11/24 12:38 AM
Sulfate	76.3	1.00	3.00		mg/L	1	08/11/24 12:38 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	960	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-23
Lab ID: 2408112-02
Collection Date: 08/07/24 09:00 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:23 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:23 PM
Barium	0.0415	0.00300	0.0100		mg/L	1	08/16/24 01:23 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:23 PM
Boron	1.93	0.100	0.300		mg/L	10	08/20/24 10:10 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:23 PM
Calcium	112	1.00	3.00		mg/L	10	08/20/24 10:10 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:23 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:23 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:23 PM
Lithium	0.0809	0.00500	0.0100		mg/L	1	08/16/24 01:23 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:23 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:23 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:23 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:46 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	258	3.00	10.0		mg/L	10	08/10/24 06:56 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 12:57 AM
Sulfate	464	10.0	30.0		mg/L	10	08/10/24 06:56 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	1550	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-22
Lab ID: 2408112-03
Collection Date: 08/07/24 09:55 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:26 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:26 PM
Barium	0.0607	0.00300	0.0100		mg/L	1	08/16/24 01:26 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:26 PM
Boron	3.31	0.100	0.300		mg/L	10	08/20/24 10:12 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:26 PM
Calcium	234	1.00	3.00		mg/L	10	08/20/24 10:12 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:26 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:26 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:26 PM
Lithium	0.0849	0.00500	0.0100		mg/L	1	08/16/24 01:26 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:26 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:26 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:26 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:48 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	292	3.00	10.0		mg/L	10	08/10/24 07:15 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 01:16 AM
Sulfate	859	10.0	30.0		mg/L	10	08/10/24 07:15 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	2270	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-21
Lab ID: 2408112-04
Collection Date: 08/07/24 10:45 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:11 PM
Arsenic	0.00392	0.00200	0.00500	J	mg/L	1	08/16/24 01:11 PM
Barium	0.0381	0.00300	0.0100		mg/L	1	08/16/24 01:11 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:11 PM
Boron	1.00	0.100	0.300		mg/L	10	08/20/24 10:00 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:11 PM
Calcium	175	1.00	3.00		mg/L	10	08/20/24 10:00 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:11 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:11 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:11 PM
Lithium	0.0689	0.00500	0.0100		mg/L	1	08/16/24 01:11 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:11 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:11 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:11 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:50 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	432	3.00	10.0		mg/L	10	08/10/24 07:34 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 01:35 AM
Sulfate	445	10.0	30.0		mg/L	10	08/10/24 07:34 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	2150	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-20
Lab ID: 2408112-05
Collection Date: 08/07/24 11:40 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:28 PM
Arsenic	0.00830	0.00200	0.00500		mg/L	1	08/16/24 01:28 PM
Barium	0.0413	0.00300	0.0100		mg/L	1	08/16/24 01:28 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:28 PM
Boron	0.147	0.0100	0.0300		mg/L	1	08/20/24 10:14 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:28 PM
Calcium	181	1.00	3.00		mg/L	10	08/16/24 02:30 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:28 PM
Cobalt	0.0612	0.00300	0.00500		mg/L	1	08/16/24 01:28 PM
Lead	0.000679	0.000300	0.00100	J	mg/L	1	08/16/24 01:28 PM
Lithium	0.00566	0.00500	0.0100	J	mg/L	1	08/16/24 01:28 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:28 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:28 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:28 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:52 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	45.1	0.300	1.00		mg/L	1	08/11/24 01:54 AM
Fluoride	0.124	0.100	0.400	J	mg/L	1	08/11/24 01:54 AM
Sulfate	791	10.0	30.0		mg/L	10	08/10/24 07:53 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	1550	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
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See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-27
Lab ID: 2408112-06
Collection Date: 08/07/24 01:05 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:31 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:31 PM
Barium	0.0257	0.00300	0.0100		mg/L	1	08/16/24 01:31 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:31 PM
Boron	0.388	0.0100	0.0300		mg/L	1	08/20/24 10:15 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:31 PM
Calcium	86.0	1.00	3.00		mg/L	10	08/16/24 02:33 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:31 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:31 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:31 PM
Lithium	0.0835	0.00500	0.0100		mg/L	1	08/16/24 01:31 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:31 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:31 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:31 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:55 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	113	3.00	10.0		mg/L	10	08/10/24 08:12 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 02:13 AM
Sulfate	556	10.0	30.0		mg/L	10	08/10/24 08:12 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	1300	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
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DF- Dilution Factor
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See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-26
Lab ID: 2408112-07
Collection Date: 08/07/24 02:00 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:34 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:34 PM
Barium	0.0132	0.00300	0.0100		mg/L	1	08/16/24 01:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:34 PM
Boron	0.483	0.0100	0.0300		mg/L	1	08/20/24 10:17 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:34 PM
Calcium	74.1	1.00	3.00		mg/L	10	08/16/24 02:36 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:34 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:34 PM
Lithium	0.105	0.00500	0.0100		mg/L	1	08/16/24 01:34 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:34 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:57 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	133	3.00	10.0		mg/L	10	08/10/24 08:31 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 02:32 AM
Sulfate	666	10.0	30.0		mg/L	10	08/10/24 08:31 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	1430	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
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DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-11AR
Lab ID: 2408112-08
Collection Date: 08/07/24 03:10 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:36 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:36 PM
Barium	0.0618	0.00300	0.0100		mg/L	1	08/16/24 01:36 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:36 PM
Boron	0.410	0.0100	0.0300		mg/L	1	08/20/24 10:19 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:36 PM
Calcium	91.3	1.00	3.00		mg/L	10	08/16/24 02:38 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:36 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 01:36 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:36 PM
Lithium	0.0389	0.00500	0.0100		mg/L	1	08/16/24 01:36 PM
Molybdenum	0.00223	0.00200	0.00500	J	mg/L	1	08/16/24 01:36 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:36 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:36 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 10:59 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	19.6	0.300	1.00		mg/L	1	08/11/24 04:07 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 04:07 AM
Sulfate	240	10.0	30.0		mg/L	10	08/10/24 08:50 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	935	10.0	10.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
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See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-19
Lab ID: 2408112-09
Collection Date: 08/07/24 04:05 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 01:58 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:58 PM
Barium	0.0195	0.00300	0.0100		mg/L	1	08/16/24 01:58 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:58 PM
Boron	0.421	0.0100	0.0300		mg/L	1	08/20/24 10:21 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:58 PM
Calcium	301	2.00	6.00		mg/L	20	08/16/24 02:41 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:58 PM
Cobalt	0.00628	0.00300	0.00500		mg/L	1	08/16/24 01:58 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 01:58 PM
Lithium	0.0661	0.00500	0.0100		mg/L	1	08/16/24 01:58 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:58 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 01:58 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 01:58 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/12/24 11:02 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	2.68	0.300	1.00		mg/L	1	08/11/24 04:26 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 04:26 AM
Sulfate	1110	10.0	30.0		mg/L	10	08/10/24 09:09 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	2300	50.0	50.0		mg/L	1	08/13/24 01:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-18
Lab ID: 2408112-10
Collection Date: 08/08/24 08:10 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 02:00 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:00 PM
Barium	0.0313	0.00300	0.0100		mg/L	1	08/16/24 02:00 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:00 PM
Boron	0.419	0.0100	0.0300		mg/L	1	08/20/24 10:23 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:00 PM
Calcium	7.59	0.100	0.300		mg/L	1	08/16/24 02:00 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:00 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 02:00 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:00 PM
Lithium	0.0141	0.00500	0.0100		mg/L	1	08/16/24 02:00 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:00 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:00 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 02:00 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.000200	0.000200	0.000300		mg/L	1	08/14/24 12:31 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	19.3	0.300	1.00		mg/L	1	08/11/24 04:45 AM
Fluoride	0.195	0.100	0.400	J	mg/L	1	08/11/24 04:45 AM
Sulfate	83.4	1.00	3.00		mg/L	1	08/11/24 04:45 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	464	10.0	10.0		mg/L	1	08/14/24 04:40 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-28
Lab ID: 2408112-11
Collection Date: 08/08/24 09:10 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 02:03 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:03 PM
Barium	0.0130	0.00300	0.0100		mg/L	1	08/16/24 02:03 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:03 PM
Boron	0.131	0.0100	0.0300		mg/L	1	08/20/24 10:42 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:03 PM
Calcium	25.7	0.500	1.50		mg/L	5	08/16/24 02:43 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:03 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 02:03 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:03 PM
Lithium	0.0183	0.00500	0.0100		mg/L	1	08/16/24 02:03 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:03 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:03 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 02:03 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/16/24 09:21 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	3.34	0.300	1.00		mg/L	1	08/11/24 05:04 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 05:04 AM
Sulfate	98.2	1.00	3.00		mg/L	1	08/11/24 05:04 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	216	10.0	10.0		mg/L	1	08/14/24 04:40 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: DUP-1
Lab ID: 2408112-12
Collection Date: 08/08/24 09:10 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 02:06 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:06 PM
Barium	0.0120	0.00300	0.0100		mg/L	1	08/16/24 02:06 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:06 PM
Boron	0.124	0.0100	0.0300		mg/L	1	08/20/24 10:44 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:06 PM
Calcium	25.0	0.100	0.300		mg/L	1	08/16/24 02:06 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:06 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 02:06 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:06 PM
Lithium	0.0176	0.00500	0.0100		mg/L	1	08/16/24 02:06 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:06 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:06 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 02:06 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/16/24 09:32 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	3.26	0.300	1.00		mg/L	1	08/11/24 05:23 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 05:23 AM
Sulfate	97.7	1.00	3.00		mg/L	1	08/11/24 05:23 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	221	10.0	10.0		mg/L	1	08/14/24 04:40 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-33
Lab ID: 2408112-13
Collection Date: 08/08/24 10:10 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/16/24 02:08 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:08 PM
Barium	0.0961	0.00300	0.0100		mg/L	1	08/16/24 02:08 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:08 PM
Boron	0.171	0.0100	0.0300		mg/L	1	08/20/24 10:46 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:08 PM
Calcium	129	1.00	3.00		mg/L	10	08/16/24 02:46 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:08 PM
Cobalt	0.00459	0.00300	0.00500	J	mg/L	1	08/16/24 02:08 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/16/24 02:08 PM
Lithium	0.0137	0.00500	0.0100		mg/L	1	08/16/24 02:08 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:08 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/16/24 02:08 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/16/24 02:08 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: CMC			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/16/24 09:35 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: KES			
Chloride	46.0	3.00	10.0		mg/L	10	08/11/24 12:19 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/11/24 05:42 AM
Sulfate	142	1.00	3.00		mg/L	1	08/11/24 05:42 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	965	50.0	50.0		mg/L	1	08/14/24 04:40 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 13-Sep-24

CLIENT: BBA Engineering
Project: A1 Landfill - CCR
Project No: 23643 V-17
Lab Order: 2408112

Client Sample ID: BMW-32
Lab ID: 2408112-14
Collection Date: 08/08/24 11:05 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW6020B		Analyst: SP			
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/16/24 02:11 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT**RunID: CETAC2_HG_240711A**

Sample ID: DCS-116189	Batch ID: 116189	TestNo: SW7470A	Units: mg/L							
SampType: DCS	Run ID: CETAC2_HG_240711A	Analysis Date: 7/11/2024 11:37:36 AM	Prep Date: 7/11/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000194	0.000200	0.000200	0	97.0	82	119	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240812B

The QC data in batch 116645 applies to the following samples: 2408112-01A, 2408112-02A, 2408112-03A, 2408112-04A, 2408112-05A, 2408112-06A, 2408112-07A, 2408112-08A, 2408112-09A

Sample ID: MB-116645	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 9:56:04 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: LCS-116645	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:00:35 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00199 0.000200 0.00200 0 99.5 85 115

Sample ID: LCSD-116645	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:02:51 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00197 0.000200 0.00200 0 98.5 85 115 1.01 15

Sample ID: 2408080-01AMS	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:09:39 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00990 0.00100 0.0100 0 99.0 80 120

Sample ID: 2408080-01AMSD	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:11:55 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0101 0.00100 0.0100 0 101 80 120 2.00 15

Sample ID: 2408080-01APDS	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:14:11 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0125 0.00100 0.0125 0 99.6 85 115

Sample ID: 2408080-01ASD	Batch ID: 116645	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:16:27 AM	Prep Date: 8/9/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.00200 0.00500 0 0 0 0 10

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240812B

Sample ID: ICV-240812		Batch ID: R134565		TestNo: SW7470A		Units: mg/L				
SampType: ICV		Run ID: CETAC2_HG_240812B		Analysis Date: 8/12/2024 9:26:30 AM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID: CCV1-240812	Batch ID: R134565	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 9:51:29 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00214	0.000200	0.00200	0	107	90	110			

Sample ID: CCV2-240812	Batch ID: R134565	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 10:36:56 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.000200	0.00200	0	102	90	110			

Sample ID: CCV3-240812	Batch ID: R134565	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240812B	Analysis Date: 8/12/2024 11:04:20 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00210	0.000200	0.00200	0	105	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240814A

The QC data in batch 116712 applies to the following samples: 2408112-10A

Sample ID: MB-116712	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:20:37 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000200 0.000300

Sample ID: LCS-116712	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:22:53 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00223 0.000300 0.00200 0 112 85 115

Sample ID: LCSD-116712	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:25:09 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00223 0.000300 0.00200 0 112 85 115 0 15

Sample ID: 2408112-10AMS	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:34:12 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00217 0.000300 0.00200 0 108 80 120

Sample ID: 2408112-10AMSD	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:36:28 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00215 0.000300 0.00200 0 108 80 120 0.926 15

Sample ID: 2408112-10APDS	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:38:44 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00265 0.000300 0.00250 0 106 85 115

Sample ID: 2408112-10ASD	Batch ID: 116712	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:41:00 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.00100 0.00150 0 0 0 0 10

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240814A

Sample ID: ICV-240814	Batch ID: R134628	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:16:03 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID: CCV1-240814	Batch ID: R134628	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240814A	Analysis Date: 8/14/2024 12:46:07 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240816A

The QC data in batch 116755 applies to the following samples: 2408112-11A, 2408112-12A, 2408112-13A

Sample ID: MB-116755	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:14:39 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: LCS-116755	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:16:55 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 85 115

Sample ID: LCSD-116755	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:19:11 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00193 0.000200 0.00200 0 96.5 85 115 1.54 15

Sample ID: 2408112-11AMS	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:23:44 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 80 120

Sample ID: 2408112-11AMSD	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:25:59 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00195 0.000200 0.00200 0 97.5 80 120 0.512 15

Sample ID: 2408112-11ASD	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:28:15 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID: 2408112-11APDS	Batch ID: 116755	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:30:30 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00233 0.000200 0.00250 0 93.2 85 115

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_240816A

Sample ID: ICV-240816	Batch ID: R134674	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:10:05 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00384	0.000200	0.00400	0	96.0	90	110			

Sample ID: CCV1-240816	Batch ID: R134674	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC2_HG_240816A	Analysis Date: 8/16/2024 9:53:12 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240606B

Sample ID: DCS2-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS2	Run ID: ICP-MS4_240606B	Analysis Date: 6/6/2024 9:52:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.270	0.300	0.300	0	90.2	70	130	0	0	

Sample ID: DCS4-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS4	Run ID: ICP-MS4_240606B	Analysis Date: 6/6/2024 9:57:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0298	0.0300	0.0300	0	99.4	70	130	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240820A

The QC data in batch 116740 applies to the following samples: 2408112-01A, 2408112-02A, 2408112-03A, 2408112-04A, 2408112-05A, 2408112-06A, 2408112-07A, 2408112-08A, 2408112-09A, 2408112-10A, 2408112-11A, 2408112-12A, 2408112-13A, 2408112-14A

Sample ID: MB-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 9:52:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	<0.0100	0.0300								
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Sample ID: LCS-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: LCS	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 9:54:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.189	0.0300	0.200	0	94.3	80	120			
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Sample ID: LCSD-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 9:56:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.205	0.0300	0.200	0	103	80	120	8.49	15	
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Sample ID: 2408112-04A SD	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:06:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	1.19	1.50	0	1.00				17.2	20	
Calcium	173	15.0	0	175				1.18	20	

Sample ID: 2408112-04A PDS	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:28:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	3.14	0.300	2.00	1.00	107	75	125			
Calcium	224	3.00	50.0	175	98.1	75	125			

Sample ID: 2408112-04A MS	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: MS	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:31:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	1.26	0.300	0.200	1.00	131	75	125			S
Calcium	180	3.00	5.00	175	98.8	75	125			

Sample ID: 2408112-04A MSD	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:33:00 AM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240820A

Sample ID: 2408112-04A MSD		Batch ID: 116740		TestNo: SW6020B		Units: mg/L				
SampType: MSD		Run ID: ICP-MS4_240820A		Analysis Date: 8/20/2024 10:33:00 AM		Prep Date: 8/15/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.38	0.300	0.200	1.00	191	75	125	9.02	15	S
Calcium	186	3.00	5.00	175	228	75	125	3.54	15	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240820A

Sample ID: ICV-240820	Batch ID: R134737	TestNo: SW6020B	Units: mg/L							
SampType: ICV	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 9:31:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0978	0.0300	0.100	0	97.8	90	110			
Calcium	2.49	0.300	2.50	0	99.6	90	110			

Sample ID: LCVL-240820	Batch ID: R134737	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 9:46:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0203	0.0300	0.0200	0	102	80	120			
Calcium	0.104	0.300	0.100	0	104	80	120			

Sample ID: CCV1-240820	Batch ID: R134737	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:36:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.205	0.0300	0.200	0	102	90	110			
Calcium	5.07	0.300	5.00	0	101	90	110			

Sample ID: CCV2-240820	Batch ID: R134737	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_240820A	Analysis Date: 8/20/2024 10:50:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.193	0.0300	0.200	0	96.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240606A

Sample ID: DCS1-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:16:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.000866	0.00250	0.00100	0	86.6	70	130	0	0	
Beryllium	0.000511	0.00100	0.000500	0	102	70	130	0	0	
Cadmium	0.000503	0.00100	0.000500	0	101	70	130	0	0	
Lead	0.000485	0.00100	0.000500	0	97.0	70	130	0	0	
Thallium	0.000538	0.00150	0.000500	0	108	70	130	0	0	

Sample ID: DCS3-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS3	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:22:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00487	0.00500	0.00500	0	97.4	70	130	0	0	
Barium	0.00503	0.0100	0.00500	0	101	70	130	0	0	
Chromium	0.00496	0.00500	0.00500	0	99.2	70	130	0	0	
Cobalt	0.00489	0.00500	0.00500	0	97.8	70	130	0	0	
Lithium	0.00467	0.0100	0.00500	0	93.4	70	130	0	0	
Molybdenum	0.00496	0.00500	0.00500	0	99.3	70	130	0	0	
Selenium	0.00461	0.00500	0.00500	0	92.2	70	130	0	0	

Sample ID: DCS4-115670	Batch ID: 115670	TestNo: SW6020B	Units: mg/L							
SampType: DCS4	Run ID: ICP-MS5_240606A	Analysis Date: 6/6/2024 10:26:00 AM	Prep Date: 6/5/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0293	0.0300	0.0300	0	97.6	70	130	0	0	
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Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

The QC data in batch 116740 applies to the following samples: 2408112-01A, 2408112-02A, 2408112-03A, 2408112-04A, 2408112-05A, 2408112-06A, 2408112-07A, 2408112-08A, 2408112-09A, 2408112-10A, 2408112-11A, 2408112-12A, 2408112-13A, 2408112-14A

Sample ID: MB-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L
SampType: MBLK	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:00:00 PM	Prep Date: 8/15/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: LCS-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L
SampType: LCS	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:03:00 PM	Prep Date: 8/15/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.199	0.00500	0.200	0	99.6	80	120			
Barium	0.196	0.0100	0.200	0	97.8	80	120			
Beryllium	0.190	0.00100	0.200	0	95.1	80	120			
Cadmium	0.198	0.00100	0.200	0	99.0	80	120			
Calcium	4.85	0.300	5.00	0	97.1	80	120			
Chromium	0.196	0.00500	0.200	0	98.0	80	120			
Cobalt	0.203	0.00500	0.200	0	102	80	120			
Lead	0.190	0.00100	0.200	0	94.9	80	120			
Lithium	0.196	0.0100	0.200	0	98.0	80	120			
Molybdenum	0.193	0.00500	0.200	0	96.5	80	120			
Selenium	0.207	0.00500	0.200	0	103	80	120			
Thallium	0.186	0.00150	0.200	0	93.1	80	120			

Sample ID: LCSD-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L
SampType: LCSD	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:06:00 PM	Prep Date: 8/15/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.7	80	120	0.309	15	
Arsenic	0.199	0.00500	0.200	0	99.5	80	120	0.127	15	
Barium	0.196	0.0100	0.200	0	98.0	80	120	0.188	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

Sample ID: LCSD-116740	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:06:00 PM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.190	0.00100	0.200	0	95.0	80	120	0.163	15	
Cadmium	0.197	0.00100	0.200	0	98.4	80	120	0.634	15	
Calcium	4.90	0.300	5.00	0	98.1	80	120	1.02	15	
Chromium	0.197	0.00500	0.200	0	98.5	80	120	0.495	15	
Cobalt	0.204	0.00500	0.200	0	102	80	120	0.222	15	
Lead	0.190	0.00100	0.200	0	95.0	80	120	0.056	15	
Lithium	0.196	0.0100	0.200	0	97.9	80	120	0.137	15	
Molybdenum	0.192	0.00500	0.200	0	96.2	80	120	0.328	15	
Selenium	0.204	0.00500	0.200	0	102	80	120	1.12	15	
Thallium	0.187	0.00150	0.200	0	93.6	80	120	0.544	15	

Sample ID: 2408112-04A SD	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:13:00 PM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0.00392				0	20	
Barium	0.0382	0.0500	0	0.0381				0.419	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	0.0742	0.0500	0	0.0689				7.37	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: 2408112-04A PDS	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:39:00 PM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.203	0.00250	0.200	0	102	75	125			
Arsenic	0.194	0.00500	0.200	0.00392	94.9	75	125			
Barium	0.237	0.0100	0.200	0.0381	99.6	75	125			
Beryllium	0.188	0.00100	0.200	0	94.0	75	125			
Cadmium	0.197	0.00100	0.200	0	98.3	75	125			
Chromium	0.199	0.00500	0.200	0	99.5	75	125			
Cobalt	0.191	0.00500	0.200	0	95.5	75	125			
Lead	0.197	0.00100	0.200	0	98.3	75	125			
Lithium	0.261	0.0100	0.200	0.0689	95.9	75	125			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

Sample ID: 2408112-04A PDS	Batch ID: 116740	TestNo: SW6020B	Units: mg/L							
SampType: PDS	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:39:00 PM	Prep Date: 8/15/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.197	0.00500	0.200	0	98.6	75	125			
Selenium	0.183	0.00500	0.200	0	91.4	75	125			
Thallium	0.196	0.00150	0.200	0	97.8	75	125			

Sample ID: 2408112-04A MS	Batch ID: 116740	TestNo: SW6020B				Units: mg/L				
SampType: MS	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:42:00 PM				Prep Date: 8/15/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	75	125			
Arsenic	0.196	0.00500	0.200	0.00392	96.2	75	125			
Barium	0.239	0.0100	0.200	0.0381	101	75	125			
Beryllium	0.188	0.00100	0.200	0	94.0	75	125			
Cadmium	0.193	0.00100	0.200	0	96.6	75	125			
Chromium	0.197	0.00500	0.200	0	98.3	75	125			
Cobalt	0.191	0.00500	0.200	0	95.3	75	125			
Lead	0.196	0.00100	0.200	0	97.8	75	125			
Lithium	0.271	0.0100	0.200	0.0689	101	75	125			
Molybdenum	0.203	0.00500	0.200	0	101	75	125			
Selenium	0.184	0.00500	0.200	0	91.9	75	125			
Thallium	0.195	0.00150	0.200	0	97.5	75	125			

Sample ID: 2408112-04A MSD	Batch ID: 116740	TestNo: SW6020B				Units: mg/L				
SampType: MSD	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:44:00 PM				Prep Date: 8/15/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	75	125	0.776	15	
Arsenic	0.194	0.00500	0.200	0.00392	94.9	75	125	1.32	15	
Barium	0.237	0.0100	0.200	0.0381	99.6	75	125	0.900	15	
Beryllium	0.186	0.00100	0.200	0	93.0	75	125	1.06	15	
Cadmium	0.190	0.00100	0.200	0	95.2	75	125	1.44	15	
Chromium	0.193	0.00500	0.200	0	96.4	75	125	1.96	15	
Cobalt	0.188	0.00500	0.200	0	94.1	75	125	1.28	15	
Lead	0.191	0.00100	0.200	0	95.4	75	125	2.43	15	
Lithium	0.269	0.0100	0.200	0.0689	100	75	125	0.794	15	
Molybdenum	0.199	0.00500	0.200	0	99.5	75	125	1.80	15	
Selenium	0.180	0.00500	0.200	0	90.2	75	125	1.87	15	
Thallium	0.190	0.00150	0.200	0	95.2	75	125	2.45	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

Sample ID: ICV-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: ICV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 9:39:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.100	0.00250	0.100	0	100	90	110			
Arsenic	0.0984	0.00500	0.100	0	98.4	90	110			
Barium	0.0994	0.0100	0.100	0	99.4	90	110			
Beryllium	0.0999	0.00100	0.100	0	99.9	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Calcium	2.40	0.300	2.50	0	96.1	90	110			
Chromium	0.0995	0.00500	0.100	0	99.5	90	110			
Cobalt	0.100	0.00500	0.100	0	100	90	110			
Lead	0.0978	0.00100	0.100	0	97.8	90	110			
Lithium	0.102	0.0100	0.100	0	102	90	110			
Molybdenum	0.0949	0.00500	0.100	0	94.9	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0954	0.00150	0.100	0	95.4	90	110			

Sample ID: LCVL-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 10:02:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00201	0.00250	0.00200	0	100	80	120			
Arsenic	0.00495	0.00500	0.00500	0	99.0	80	120			
Barium	0.00510	0.0100	0.00500	0	102	80	120			
Beryllium	0.000997	0.00100	0.00100	0	99.7	80	120			
Cadmium	0.00105	0.00100	0.00100	0	105	80	120			
Calcium	0.0908	0.300	0.100	0	90.8	80	120			
Chromium	0.00507	0.00500	0.00500	0	101	80	120			
Cobalt	0.00498	0.00500	0.00500	0	99.6	80	120			
Lead	0.000958	0.00100	0.00100	0	95.8	80	120			
Lithium	0.00989	0.0100	0.0100	0	98.9	80	120			
Molybdenum	0.00471	0.00500	0.00500	0	94.2	80	120			
Selenium	0.00509	0.00500	0.00500	0	102	80	120			
Thallium	0.000910	0.00150	0.00100	0	91.0	80	120			

Sample ID: CCV4-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 12:49:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.200	0.00250	0.200	0	99.8	90	110			
Arsenic	0.198	0.00500	0.200	0	99.2	90	110			
Barium	0.198	0.0100	0.200	0	98.9	90	110			
Beryllium	0.188	0.00100	0.200	0	93.8	90	110			
Cadmium	0.198	0.00100	0.200	0	98.8	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

Sample ID: CCV4-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 12:49:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.83	0.300	5.00	0	96.6	90	110			
Chromium	0.197	0.00500	0.200	0	98.3	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.191	0.00100	0.200	0	95.7	90	110			
Lithium	0.191	0.0100	0.200	0	95.4	90	110			
Molybdenum	0.194	0.00500	0.200	0	96.8	90	110			
Selenium	0.201	0.00500	0.200	0	100	90	110			
Thallium	0.188	0.00150	0.200	0	94.0	90	110			

Sample ID: CCV5-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 1:47:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	98.8	90	110			
Arsenic	0.194	0.00500	0.200	0	96.9	90	110			
Barium	0.196	0.0100	0.200	0	98.1	90	110			
Beryllium	0.192	0.00100	0.200	0	96.0	90	110			
Cadmium	0.199	0.00100	0.200	0	99.4	90	110			
Calcium	4.90	0.300	5.00	0	98.0	90	110			
Chromium	0.198	0.00500	0.200	0	99.2	90	110			
Cobalt	0.201	0.00500	0.200	0	100	90	110			
Lead	0.190	0.00100	0.200	0	95.2	90	110			
Lithium	0.203	0.0100	0.200	0	102	90	110			
Molybdenum	0.193	0.00500	0.200	0	96.4	90	110			
Selenium	0.205	0.00500	0.200	0	103	90	110			
Thallium	0.187	0.00150	0.200	0	93.7	90	110			

Sample ID: CCV6-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 2:20:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.1	90	110			
Arsenic	0.192	0.00500	0.200	0	95.8	90	110			
Barium	0.198	0.0100	0.200	0	99.2	90	110			
Beryllium	0.189	0.00100	0.200	0	94.5	90	110			
Cadmium	0.198	0.00100	0.200	0	99.2	90	110			
Calcium	4.91	0.300	5.00	0	98.2	90	110			
Chromium	0.197	0.00500	0.200	0	98.5	90	110			
Cobalt	0.199	0.00500	0.200	0	99.7	90	110			
Lead	0.192	0.00100	0.200	0	95.8	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240816B

Sample ID: CCV6-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 2:20:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.193	0.00500	0.200	0	96.6	90	110			
Selenium	0.206	0.00500	0.200	0	103	90	110			
Thallium	0.188	0.00150	0.200	0	94.0	90	110			

Sample ID: CCV7-240816	Batch ID: R134687	TestNo: SW6020B	Units: mg/L							
SampType: CCV	Run ID: ICP-MS5_240816B	Analysis Date: 8/16/2024 2:52:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.84	0.300	5.00	0	96.7	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240725A

Sample ID: DCS3-116407	Batch ID: 116407	TestNo: E300	Units: mg/L							
SampType: DCS3	Run ID: IC4_240725A	Analysis Date: 7/25/2024 12:42:48 PM	Prep Date: 7/25/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.794	1.00	1.000	0	79.4	70	130	0	0	
Fluoride	0.333	0.400	0.4000	0	83.1	70	130	0	0	
Sulfate	2.17	3.00	3.000	0	72.5	70	130	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240810A

The QC data in batch 116669 applies to the following samples: 2408112-01B, 2408112-02B, 2408112-03B, 2408112-04B, 2408112-05B, 2408112-06B, 2408112-07B, 2408112-08B, 2408112-09B, 2408112-10B, 2408112-11B, 2408112-12B, 2408112-13B

Sample ID: MB-116669	Batch ID: 116669	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC4_240810A	Analysis Date: 8/10/2024 2:57:57 PM	Prep Date: 8/10/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID: LCS-116669	Batch ID: 116669	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC4_240810A	Analysis Date: 8/10/2024 3:16:57 PM	Prep Date: 8/10/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.86	1.00	10.00	0	98.6	90	110
Fluoride	3.85	0.400	4.000	0	96.3	90	110
Sulfate	27.6	3.00	30.00	0	91.9	90	110

Sample ID: LCSD-116669	Batch ID: 116669	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC4_240810A	Analysis Date: 8/10/2024 3:35:57 PM	Prep Date: 8/10/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.94	1.00	10.00	0	99.4	90	110	0.786	20
Fluoride	3.88	0.400	4.000	0	97.0	90	110	0.729	20
Sulfate	27.7	3.00	30.00	0	92.4	90	110	0.539	20

Sample ID: 2408112-01BMS	Batch ID: 116669	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC4_240810A	Analysis Date: 8/10/2024 6:18:54 PM	Prep Date: 8/10/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	639	10.0	400.0	342.5	74.1	90	110			S
Fluoride	337	4.00	400.0	0	84.2	90	110			S
Sulfate	422	30.0	400.0	73.65	87.1	90	110			S

Sample ID: 2408112-01BMSD	Batch ID: 116669	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC4_240810A	Analysis Date: 8/10/2024 6:37:54 PM	Prep Date: 8/10/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	639	10.0	400.0	342.5	74.2	90	110	0.053	20	S
Fluoride	341	4.00	400.0	0	85.1	90	110	1.11	20	S
Sulfate	423	30.0	400.0	73.65	87.3	90	110	0.153	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240810A

Sample ID: 2408112-11BMS		Batch ID: 116669		TestNo: E300			Units: mg/L			
SampType: MS		Run ID: IC4_240810A		Analysis Date: 8/10/2024 11:22:54 PM			Prep Date: 8/10/2024			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	386	10.0	400.0	5.996	95.1	90	110			
Fluoride	329	4.00	400.0	0	82.2	90	110			S
Sulfate	445	30.0	400.0	90.24	88.6	90	110			S

Sample ID: 2408112-11BMSD	Batch ID: 116669	TestNo: E300				Units: mg/L				
SampType: MSD	Run ID: IC4_240810A	Analysis Date: 8/10/2024 11:41:54 PM				Prep Date: 8/10/2024				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	388	10.0	400.0	5.996	95.5	90	110	0.350	20	
Fluoride	330	4.00	400.0	0	82.4	90	110	0.253	20	S
Sulfate	446	30.0	400.0	90.24	88.9	90	110	0.257	20	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_240810A

Sample ID: ICV-240810	Batch ID: R134552	TestNo: E300				Units: mg/L				
SampType: ICV	Run ID: IC4_240810A	Analysis Date: 8/10/2024 2:19:57 PM				Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.2	1.00	25.00	0	101	90	110			
Fluoride	9.96	0.400	10.00	0	99.6	90	110			
Sulfate	71.9	3.00	75.00	0	95.8	90	110			

Sample ID: CCV2-240810	Batch ID: R134552	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC4_240810A	Analysis Date: 8/11/2024 3:29:54 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	3.95	0.400	4.000	0	98.8	90	110			
Sulfate	28.4	3.00	30.00	0	94.6	90	110			

Sample ID: CCV3-240810	Batch ID: R134552	TestNo: E300	Units: mg/L
SampType: CCV	Run ID: IC4_240810A	Analysis Date: 8/11/2024 6:39:53 AM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	3.96	0.400	4.000	0	99.0	90	110			
Sulfate	28.3	3.00	30.00	0	94.3	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240813C

The QC data in batch 116708 applies to the following samples: 2408112-01B, 2408112-02B, 2408112-03B, 2408112-04B, 2408112-05B, 2408112-06B, 2408112-07B, 2408112-08B, 2408112-09B

Sample ID: MB-116708	Batch ID: 116708	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_240813C	Analysis Date: 8/13/2024 1:15:00 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID: LCS-116708	Batch ID: 116708	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_240813C	Analysis Date: 8/13/2024 1:15:00 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 743 10.0 745.6 0 99.7 90 113

Sample ID: 2408112-04B-DUP	Batch ID: 116708	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240813C	Analysis Date: 8/13/2024 1:15:00 PM	Prep Date: 8/13/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2170 50.0 0 2145 1.16 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240814B

The QC data in batch 116734 applies to the following samples: 2408112-10B, 2408112-11B, 2408112-12B, 2408112-13B

Sample ID: MB-116734	Batch ID: 116734	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_240814B	Analysis Date: 8/14/2024 4:40:00 PM	Prep Date: 8/14/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID: LCS-116734	Batch ID: 116734	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_240814B	Analysis Date: 8/14/2024 4:40:00 PM	Prep Date: 8/14/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 753 10.0 745.6 0 101 90 113

Sample ID: 2408143-01F-DUP	Batch ID: 116734	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240814B	Analysis Date: 8/14/2024 4:40:00 PM	Prep Date: 8/14/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2940 50.0 0 2990 1.69 5

Sample ID: 2408154-01F-DUP	Batch ID: 116734	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_240814B	Analysis Date: 8/14/2024 4:40:00 PM	Prep Date: 8/14/2024							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2440 50.0 0 2410 1.24 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2408112
Project: A1 Landfill - CCR

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	mg/L	mg/L
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	MDL	MQL
Analyte	mg/L	mg/L
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

TestNo: SW7470A	MDL	MQL
Analyte	mg/L	mg/L
Mercury	0.000200	0.000300
Mercury	0.0000800	0.000200

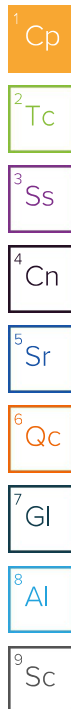
TestNo: M2540C	MDL	MQL
Analyte	mg/L	mg/L
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP



ANALYTICAL REPORT

September 13, 2024



DHL Analytical, Inc.

Sample Delivery Group: L1767603
Samples Received: 08/14/2024
Project Number: 2408112
Description:

Report To: John DuPont
2300 Double Creek Drive
Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

BMW-24 L1767603-01 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 08:05 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2344419	1	08/16/24 10:39	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2344419	1	08/16/24 10:39	08/19/24 13:19	ZRG	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

BMW-23 L1767603-02 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 09:00 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2344419	1	08/16/24 10:39	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2344419	1	08/16/24 10:39	08/19/24 13:19	ZRG	Mt. Juliet, TN

BMW-22 L1767603-03 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 09:55 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2344419	1	08/16/24 10:39	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2344419	1	08/16/24 10:39	08/19/24 13:19	ZRG	Mt. Juliet, TN

BMW-21 L1767603-04 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 10:45 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

BMW-20 L1767603-05 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 11:40 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/02/24 11:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

BMW-27 L1767603-06 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 13:05 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

BMW-26 L1767603-07 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 14:00 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

BMW-11AR L1767603-08 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 15:10 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

BMW-19 L1767603-09 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/07/24 16:05 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

BMW-18 L1767603-10 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/08/24 08:10 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

BMW-28 L1767603-11 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/08/24 09:10 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

DUP-1 L1767603-12 Non-Potable Water

Collected by
Collected date/time
Received date/time

08/08/24 09:10 08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

BMW-33 L1767603-13 Non-Potable Water

Collected by

Collected date/time

Received date/time

08/08/24 10:10

08/14/24 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349602	1	08/27/24 11:02	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/04/24 20:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

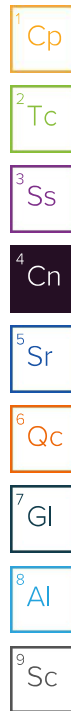
⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Donna Eidson
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	2.96		0.338	0.561	0.523	0.274	09/02/2024 11:00	WG2349602
(T) Barium	96.1					30.0-143	09/02/2024 11:00	WG2349602
(T) Yttrium	83.0					30.0-136	09/02/2024 11:00	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	4.28		0.629	0.701	09/02/2024 11:00	WG2344419

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.32		0.530	1.17	0.467	0.296	08/19/2024 13:19	WG2344419
(T) Barium-133	93.9					30.0-143	08/19/2024 13:19	WG2344419

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.937		0.262	0.460	0.444	0.232	09/02/2024 11:00	WG2349602
(T) Barium	105					30.0-143	09/02/2024 11:00	WG2349602
(T) Yttrium	110					30.0-136	09/02/2024 11:00	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.77		0.487	0.579	09/02/2024 11:00	WG2344419

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.831		0.410	0.875	0.372	0.248	08/19/2024 13:19	WG2344419
(T) Barium-133	94.8					30.0-143	08/19/2024 13:19	WG2344419

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.85		0.288	0.515	0.458	0.242	09/02/2024 11:00	WG2349602
(T) Barium	88.5					30.0-143	09/02/2024 11:00	WG2349602
(T) Yttrium	86.0					30.0-136	09/02/2024 11:00	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.68		0.469	0.536	09/02/2024 11:00	WG2344419

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.826		0.370	0.758	0.278	0.196	08/19/2024 13:19	WG2344419
(T) Barium-133	102					30.0-143	08/19/2024 13:19	WG2344419

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.389	J	0.287	0.485	0.503	0.262	09/02/2024 11:00	WG2349602
(T) Barium	102					30.0-143	09/02/2024 11:00	WG2349602
(T) Yttrium	125					30.0-136	09/02/2024 11:00	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.955		0.408	0.560	09/02/2024 11:00	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.567		0.290	0.614	0.246	0.172	08/22/2024 14:41	WG2346666
(T) Barium-133	105					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.941		0.248	0.452	0.418	0.220	09/02/2024 11:00	WG2349602
(T) Barium	94.6					30.0-143	09/02/2024 11:00	WG2349602
(T) Yttrium	126					30.0-136	09/02/2024 11:00	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.98		0.477	0.515	09/02/2024 11:00	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.04		0.408	0.953	0.301	0.205	08/22/2024 14:41	WG2346666
(T) Barium-133	112					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.826		0.288	0.495	0.491	0.257	09/04/2024 20:56	WG2349602
(T) Barium	92.2					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	127					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.56		0.438	0.556	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.736		0.330	0.680	0.260	0.180	08/22/2024 14:41	WG2346666
(T) Barium-133	106					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.166	U	0.247	0.457	0.452	0.238	09/04/2024 20:56	WG2349602
(T) Barium	89.9					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	122					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.337	J	0.325	0.482	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.337		0.211	0.408	0.168	0.132	08/22/2024 14:41	WG2346666
(T) Barium-133	104					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.703		0.292	0.506	0.501	0.263	09/04/2024 20:56	WG2349602
(T) Barium	86.5					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	128					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.994		0.369	0.556	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.291		0.226	0.403	0.240	0.175	08/22/2024 14:41	WG2346666
(T) Barium-133	95.9					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.952		0.356	0.636	0.609	0.320	09/04/2024 20:56	WG2349602
(T) Barium	98.0					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	116					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.24		0.406	0.634	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.289		0.196	0.373	0.178	0.135	08/22/2024 14:41	WG2346666
(T) Barium-133	94.3					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.316	J	0.217	0.421	0.381	0.202	09/04/2024 20:56	WG2349602
(T) Barium	94.4					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	112					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.12		0.403	0.455	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.804		0.339	0.730	0.249	0.174	08/22/2024 14:41	WG2346666
(T) Barium-133	110					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.414		0.216	0.416	0.376	0.198	09/04/2024 20:56	WG2349602
(T) Barium	98.5					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	106					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.10		0.429	0.536	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.691		0.371	0.765	0.382	0.243	08/22/2024 14:41	WG2346666
(T) Barium-133	102					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.322	U	0.241	0.451	0.446	0.235	09/04/2024 20:56	WG2349602
(T) Barium	89.4					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	119					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.503	J	0.390	0.537	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.503		0.306	0.583	0.299	0.207	08/22/2024 14:41	WG2346666
(T) Barium-133	103					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.526		0.215	0.414	0.370	0.196	09/04/2024 20:56	WG2349602
(T) Barium	98.8					30.0-143	09/04/2024 20:56	WG2349602
(T) Yttrium	118					30.0-136	09/04/2024 20:56	WG2349602

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.753		0.334	0.507	09/04/2024 20:56	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.226	J	0.255	0.428	0.347	0.234	08/22/2024 14:41	WG2346666
(T) Barium-133	96.3					30.0-143	08/22/2024 14:41	WG2346666

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4116667-1 09/02/24 11:00

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.162	<u>U</u>	0.160	0.295	0.155
(T) Barium	121		121		
(T) Yttrium	90.7		90.7		

L1767603-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1767603-09 09/04/24 20:56 • (DUP) R4116667-5 09/02/24 11:00

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.952	0.356	0.609	0.320	0.0292	0.373	0.667	0.347	188	1.79	<u>U</u>	20	3
(T) Barium	98.0				105	105							
(T) Yttrium	116				99.8	99.8							

Laboratory Control Sample (LCS)

(LCS) R4116667-2 09/02/24 11:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.37	87.4	80.0-120	
(T) Barium			124		
(T) Yttrium			98.5		

L1766835-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1766835-03 09/02/24 11:00 • (MS) R4116667-3 09/02/24 11:00 • (MSD) R4116667-4 09/02/24 11:00

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.871	16.8	15.5	95.4	87.5	1	70.0-130			8.18		20
(T) Barium		114			135	131							
(T) Yttrium		98.1			85.3	106							

1

Cp

2

Tc

3

Ss

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Cn

5

Sr

6

Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R4109142-1 08/19/24 13:19

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.00612	U	0.0353	0.0655	0.0390
(T) Barium-133	83.2		83.2		

L1767603-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1767603-02 08/19/24 13:19 • (DUP) R4109142-5 08/19/24 13:19

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.831	0.410	0.372	0.248	0.619	0.302	0.253	0.175	29.2	0.416		20	3
(T) Barium-133	94.8				102	102							

Laboratory Control Sample (LCS)

(LCS) R4109142-2 08/19/24 13:19

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.75	115	75.0-125	
(T) Barium-133			75.0		

L1766791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1766791-03 08/19/24 13:19 • (MS) R4109142-3 08/19/24 13:19 • (MSD) R4109142-4 08/19/24 13:19

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.333	22.5	18.7	111	91.6	1	75.0-125			18.6		20
(T) Barium-133		84.3			81.6	74.4							



Method Blank (MB)

(MB) R4110674-1 08/22/24 14:41

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00765	U	0.0503	0.0903	0.0596
(T) Barium-133	93.3		93.3		

L1767606-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1767606-01 08/22/24 14:41 • (DUP) R4110674-5 08/22/24 14:41

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.315	0.299	0.385	0.251	0.302	0.199	0.166	0.130	4.34	0.0373		20	3
(T) Barium-133	99.5				94.3	94.3							

Laboratory Control Sample (LCS)

(LCS) R4110674-2 08/22/24 14:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.09	102	75.0-125	
(T) Barium-133			92.3		

L1767788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1767788-01 08/22/24 14:41 • (MS) R4110674-3 08/22/24 14:41 • (MSD) R4110674-4 08/22/24 14:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.426	18.4	17.6	89.8	86.0	1	75.0-125			4.17		20
(T) Barium-133		101			91.9	99.9							

1

Cp

2

Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Guide to Reading and Understanding Your Laboratory Report

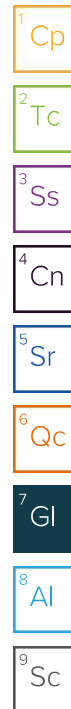
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

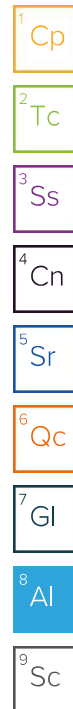
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



DHL Analytical, Inc.

2300 Double Creek Drive

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TEL: (512) 388-8222

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Work Order: 2408112

Subcontractor:

Pace Analytical

12065 Lebanon Rd

Mt. Juliet, TN 37122

TEL: (615) 773-5923

FAX:

Acct #: DHLRRTX

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

B020

U767603

12-Aug-24

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests			
					Ra-228	Ra-226		
					E904.0	M7500 Ra B M		
BMW-24	Aqueous	01C	08/07/24 08:05 AM	1LHDPEHNO3		1		J-01
BMW-24	Aqueous	01D	08/07/24 08:05 AM	1LHDPEHNO3	1			J-02
BMW-23	Aqueous	02C	08/07/24 09:00 AM	1LHDPEHNO3		1		J-03
BMW-23	Aqueous	02D	08/07/24 09:00 AM	1LHDPEHNO3	1			J-04
BMW-22	Aqueous	03C	08/07/24 09:55 AM	1LHDPEHNO3		1		J-05
BMW-22	Aqueous	03D	08/07/24 09:55 AM	1LHDPEHNO3	1			J-06
BMW-21	Aqueous	04C	08/07/24 10:45 AM	1LHDPEHNO3		1		J-07
BMW-21	Aqueous	04D	08/07/24 10:45 AM	1LHDPEHNO3	1			J-08
BMW-20	Aqueous	05C	08/07/24 11:40 AM	1LHDPEHNO3		1		J-09
BMW-20	Aqueous	05D	08/07/24 11:40 AM	1LHDPEHNO3	1			J-10
BMW-27	Aqueous	06C	08/07/24 01:05 PM	1LHDPEHNO3		1		J-11
BMW-27	Aqueous	06D	08/07/24 01:05 PM	1LHDPEHNO3	1			J-12
BMW-26	Aqueous	07C	08/07/24 02:00 PM	1LHDPEHNO3		1		J-13
BMW-26	Aqueous	07D	08/07/24 02:00 PM	1LHDPEHNO3	1			J-14
BMW-11AR	Aqueous	08C	08/07/24 03:10 PM	1LHDPEHNO3		1		J-15
BMW-11AR	Aqueous	08D	08/07/24 03:10 PM	1LHDPEHNO3	1			J-16
BMW-19	Aqueous	09C	08/07/24 04:05 PM	1LHDPEHNO3		1		J-17

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Date/Time

Date/Time

Relinquished by:

8/12/24 1700

Received by:

CRORZEB

08.14.24

1030

Relinquished by:

Received by:

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RA Screen <0.5 mR/hr: ☒ Y ☐ N

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX:

Work Order: 2408112

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

TEL: (615) 773-5923

FAX:

Acct #: DHLRRTX

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

U767603

12-Aug-24

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
BMW-19	Aqueous	09D	08/07/24 04:05 PM	1LHDPEHNO3	1					-09
BMW-18	Aqueous	10C	08/08/24 08:10 AM	1LHDPEHNO3		1				J-10
BMW-18	Aqueous	10D	08/08/24 08:10 AM	1LHDPEHNO3	1					J-11
BMW-28	Aqueous	11C	08/08/24 09:10 AM	1LHDPEHNO3		1				J-11
BMW-28	Aqueous	11D	08/08/24 09:10 AM	1LHDPEHNO3	1					J-12
DUP-1	Aqueous	12C	08/08/24 09:10 AM	1LHDPEHNO3		1				J-12
DUP-1	Aqueous	12D	08/08/24 09:10 AM	1LHDPEHNO3	1					J-12
BMW-33	Aqueous	13C	08/08/24 10:10 AM	1LHDPEHNO3		1				J-13
BMW-33	Aqueous	13D	08/08/24 10:10 AM	1LHDPEHNO3	1					J-13

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Date/Time

Relinquished by:

8/12/24 1700

Date/Time

Received by:

08/14/24 1030

Relinquished by:

Received by:

L1767603

<u>Tracking Numbers</u>		<u>Temperature</u>
UPS		Amb.
UPS		Amb

Name

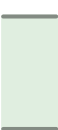
Date

APPENDIX B

ASSESSMENT MONITORING PROGRAM STATISTICAL DATA SUMMARY

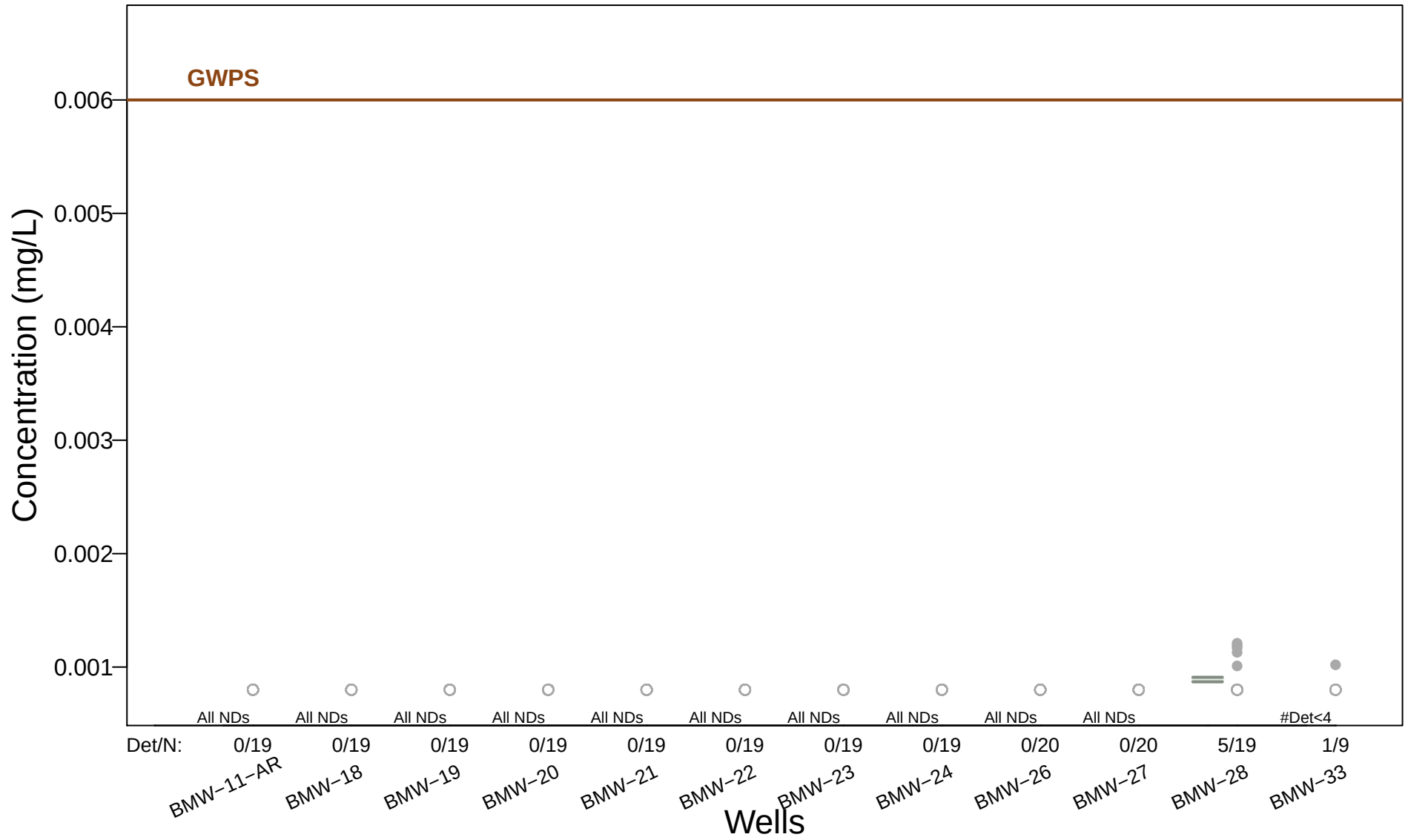
Confidence Interval Graphs

EXPLANATION

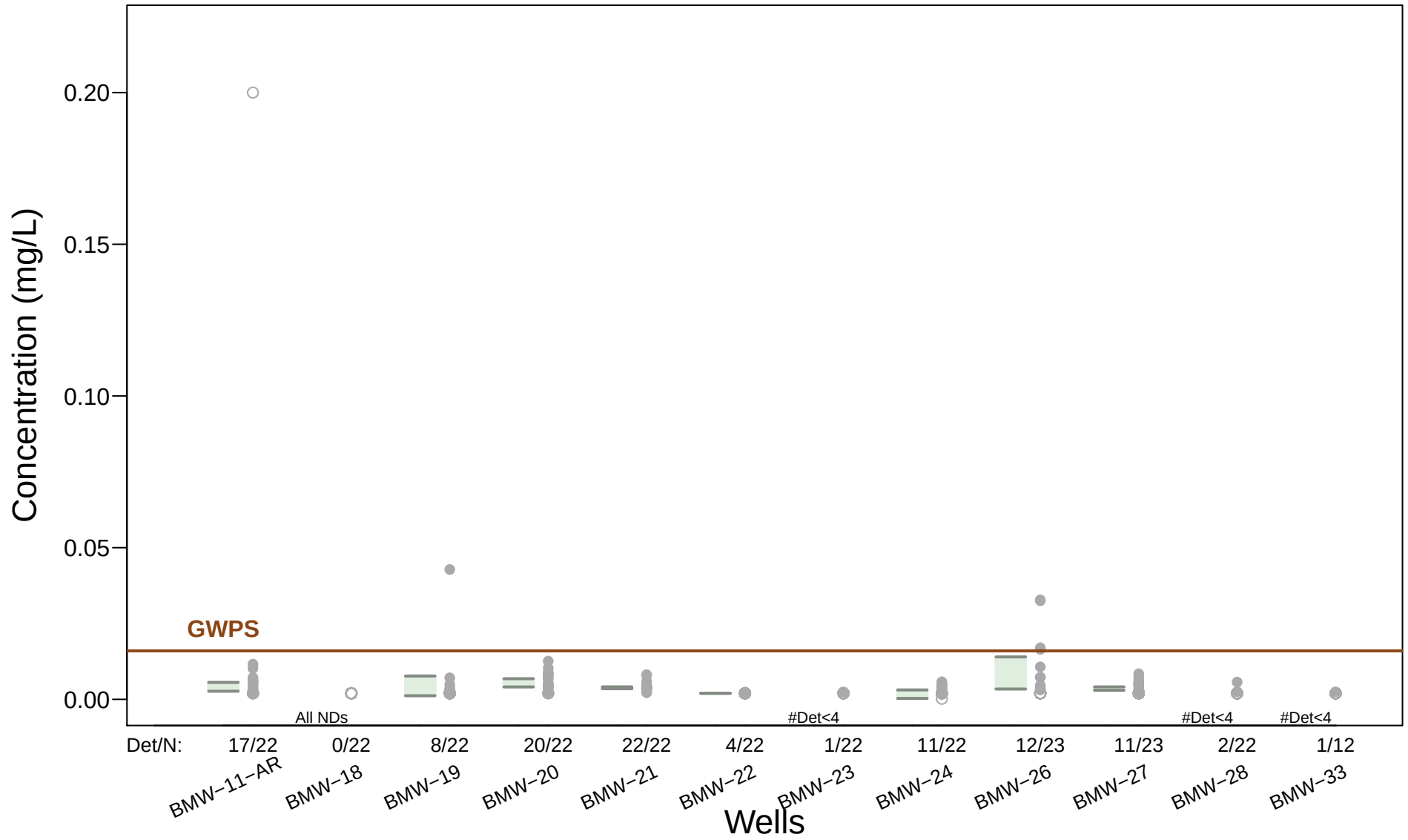
-  95% Upper confidence limit
- 95% Lower confidence limit
-  Detected sample concentration
-  Non-detect sample result (concentration set to laboratory reporting limit)

Note: An SSL is indicated if the lower confidence limit exceeds the GWPS.

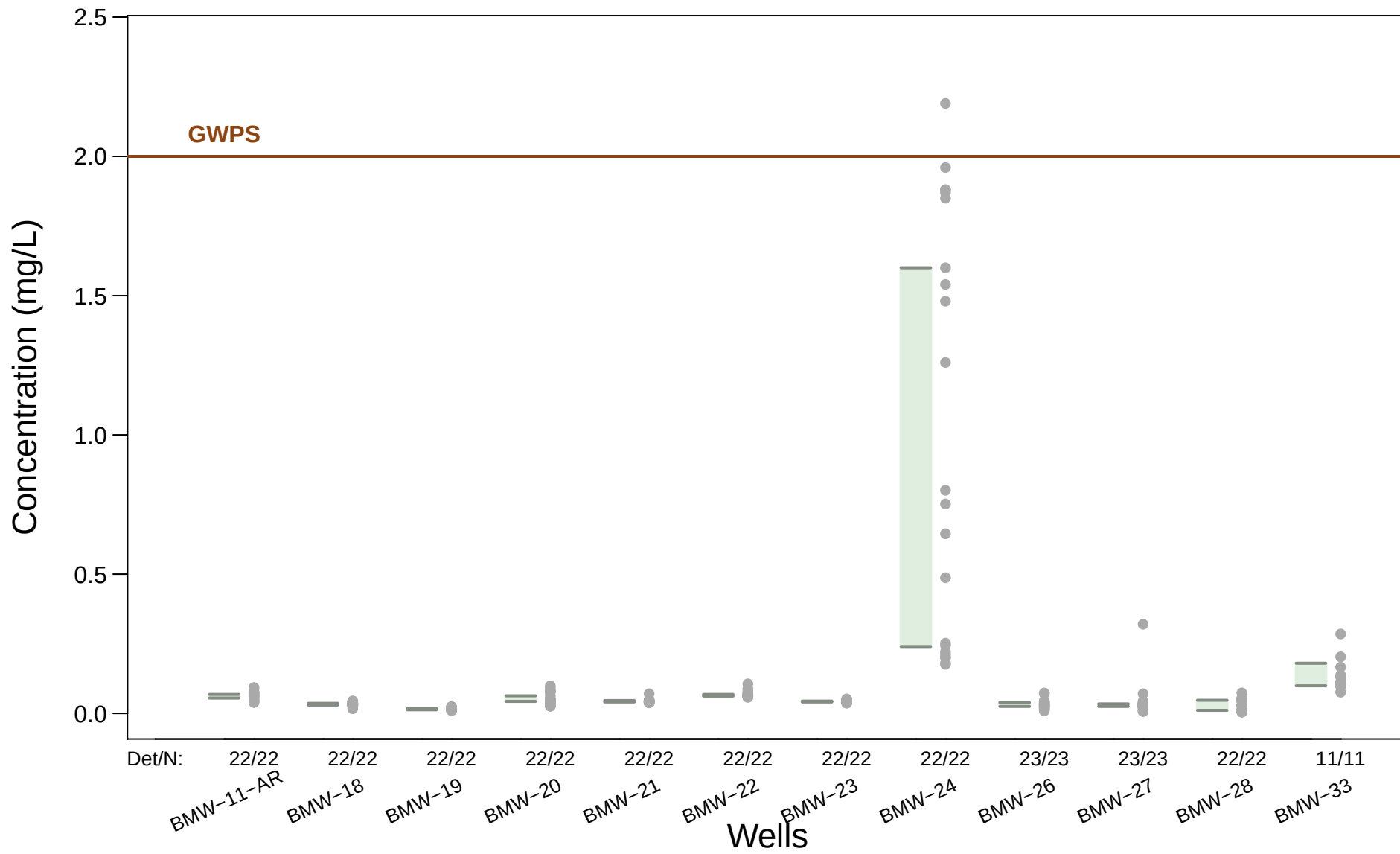
Antimony – 95% Confidence Intervals



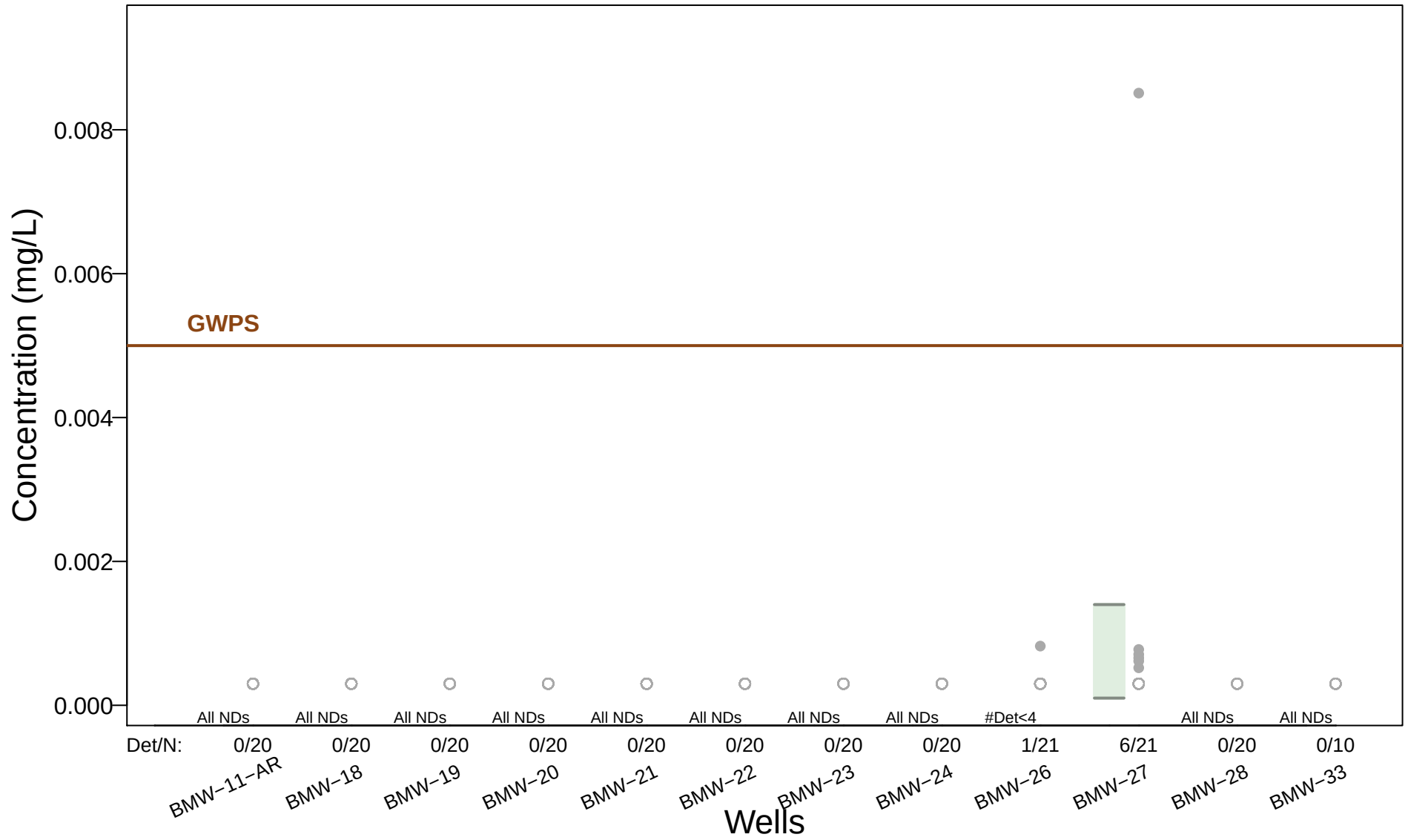
Arsenic – 95% Confidence Intervals



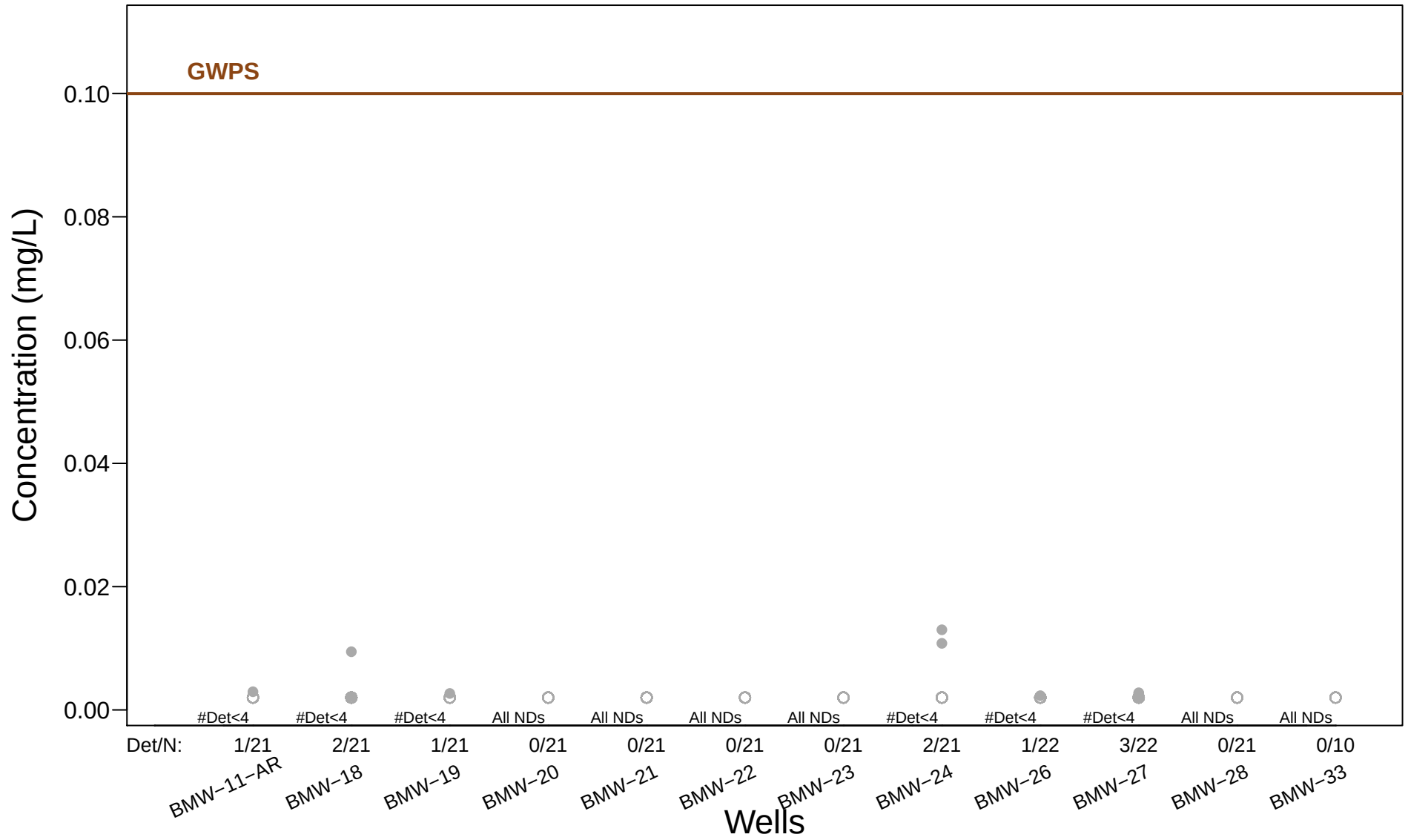
Barium – 95% Confidence Intervals



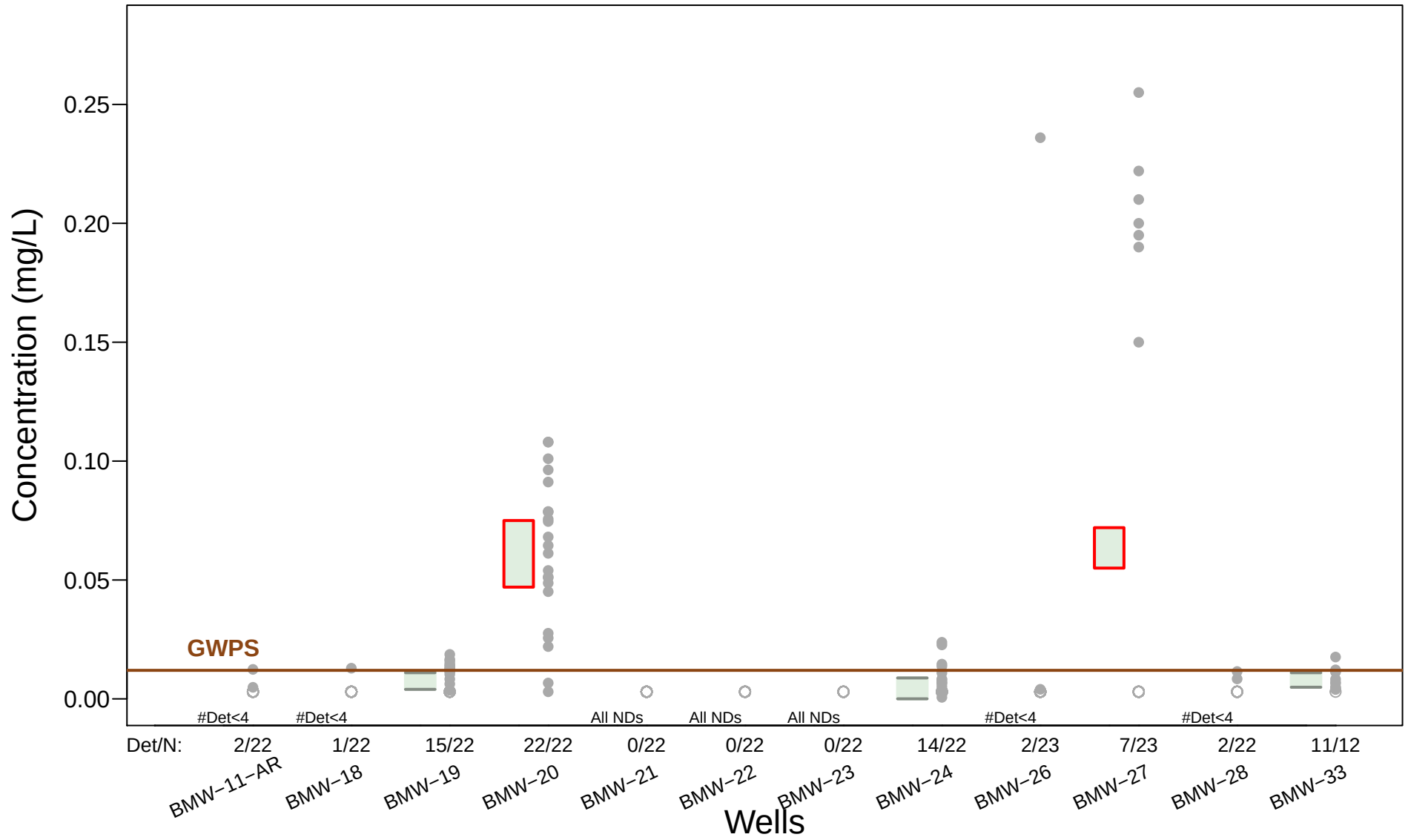
Cadmium – 95% Confidence Intervals



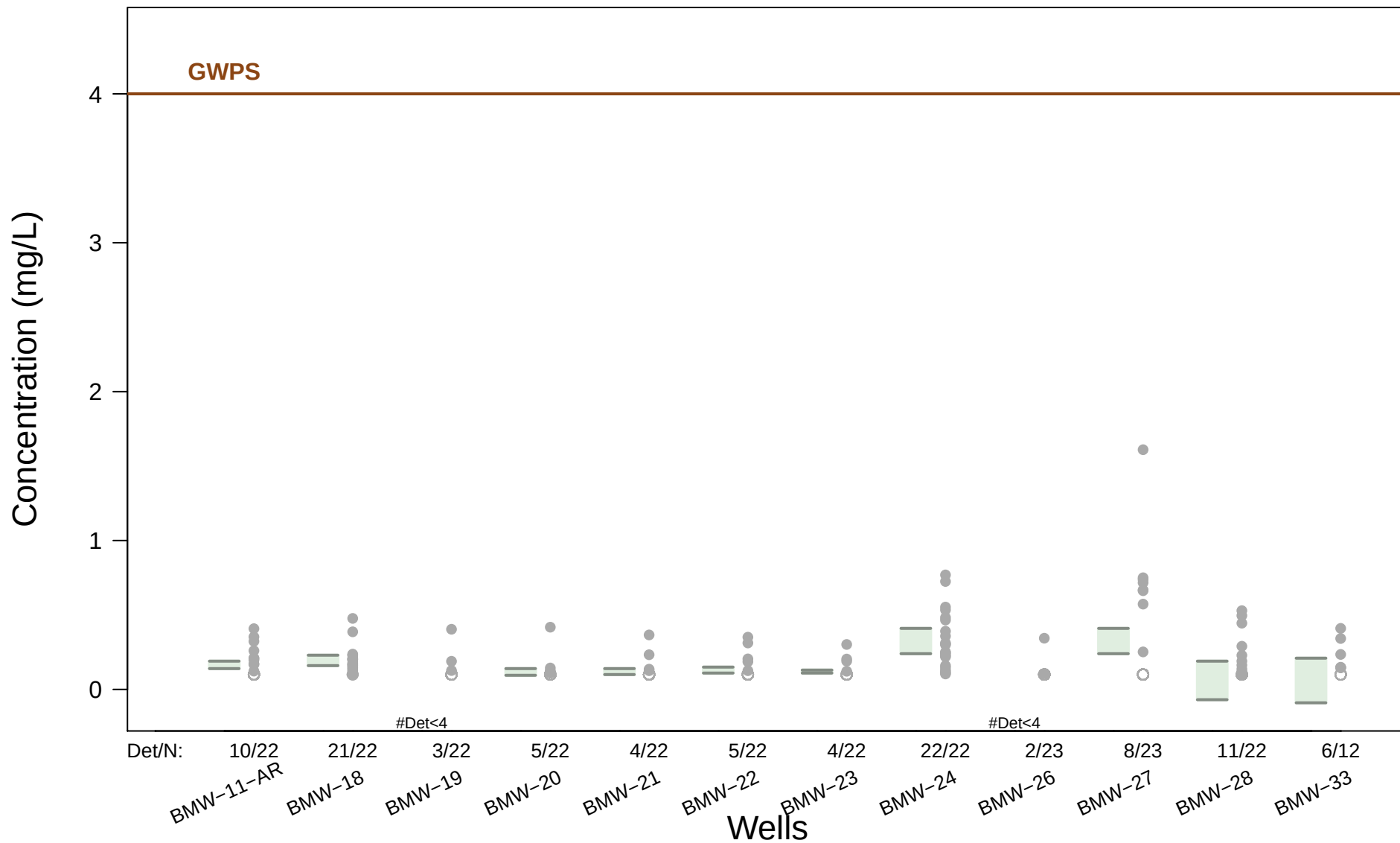
Chromium – 95% Confidence Intervals



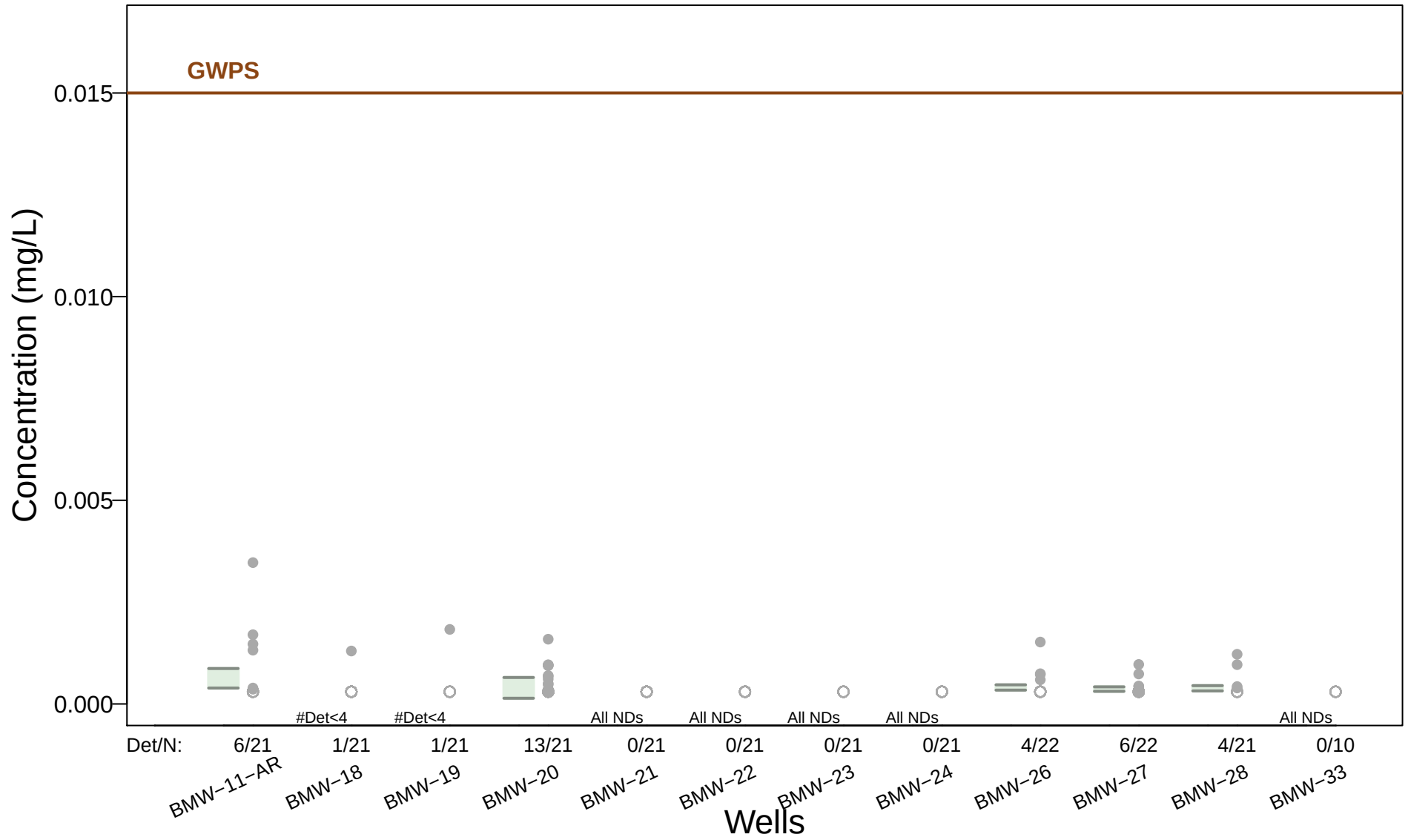
Cobalt – 95% Confidence Intervals



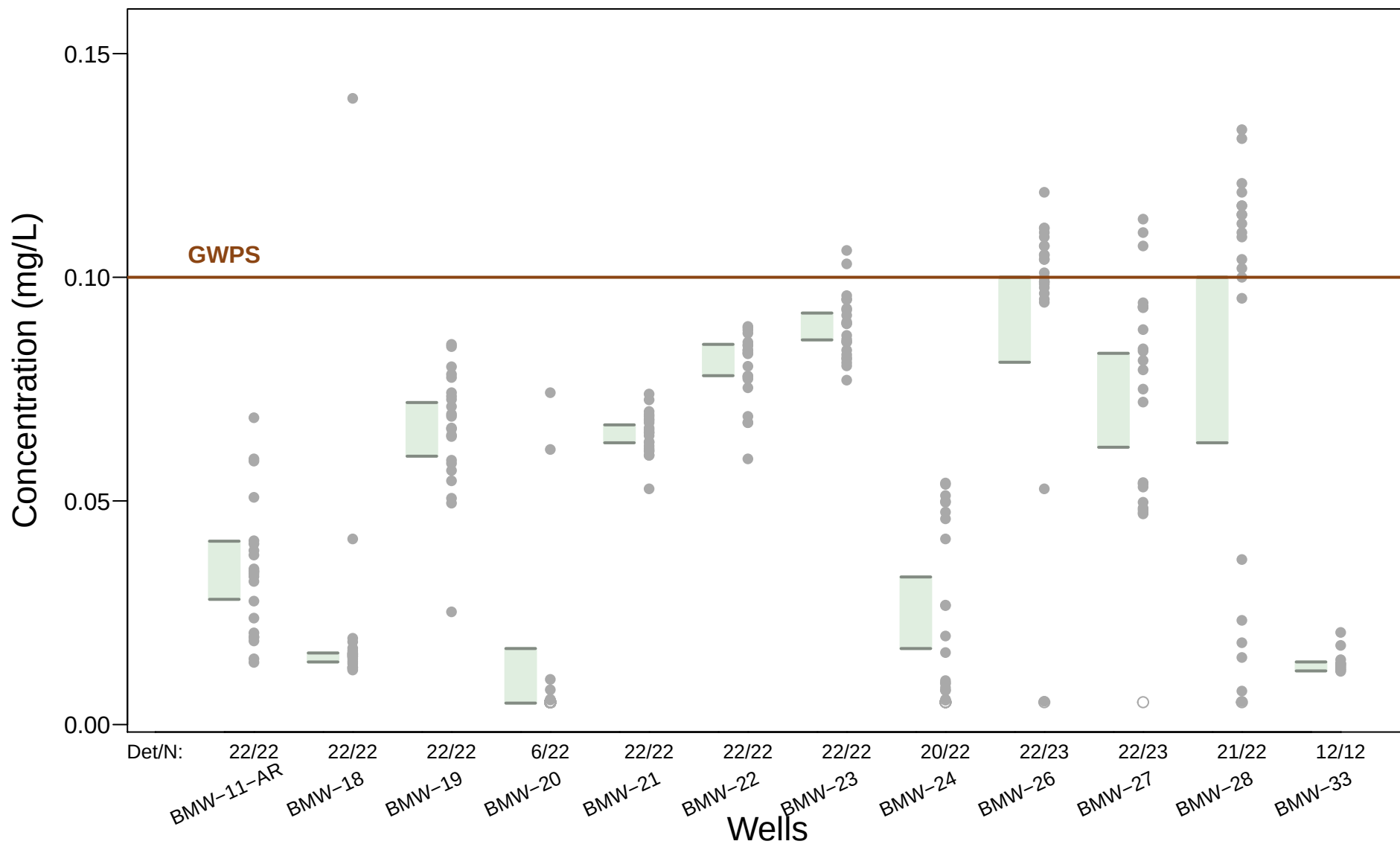
Fluoride (Appendix IV) – 95% Confidence Intervals



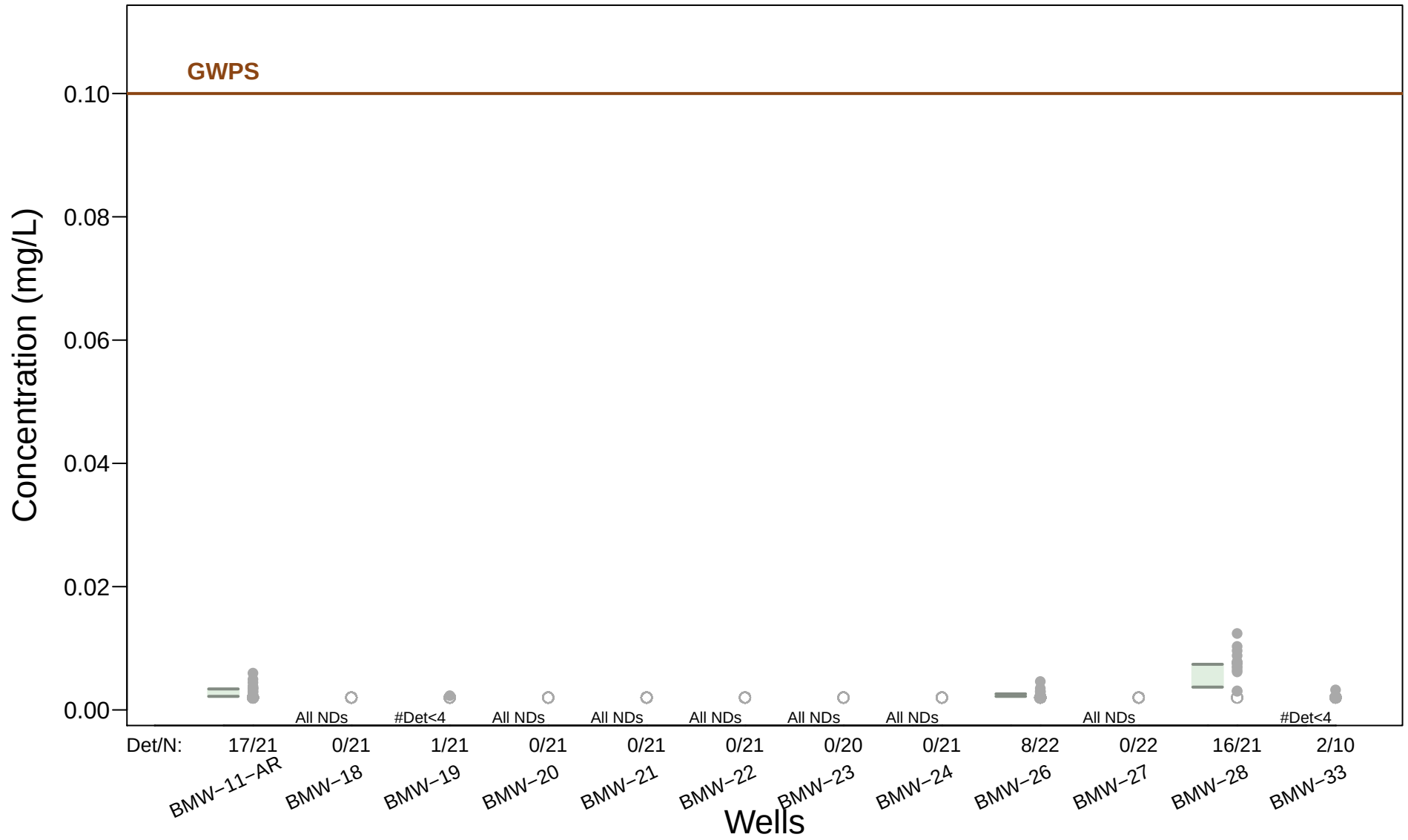
Lead – 95% Confidence Intervals



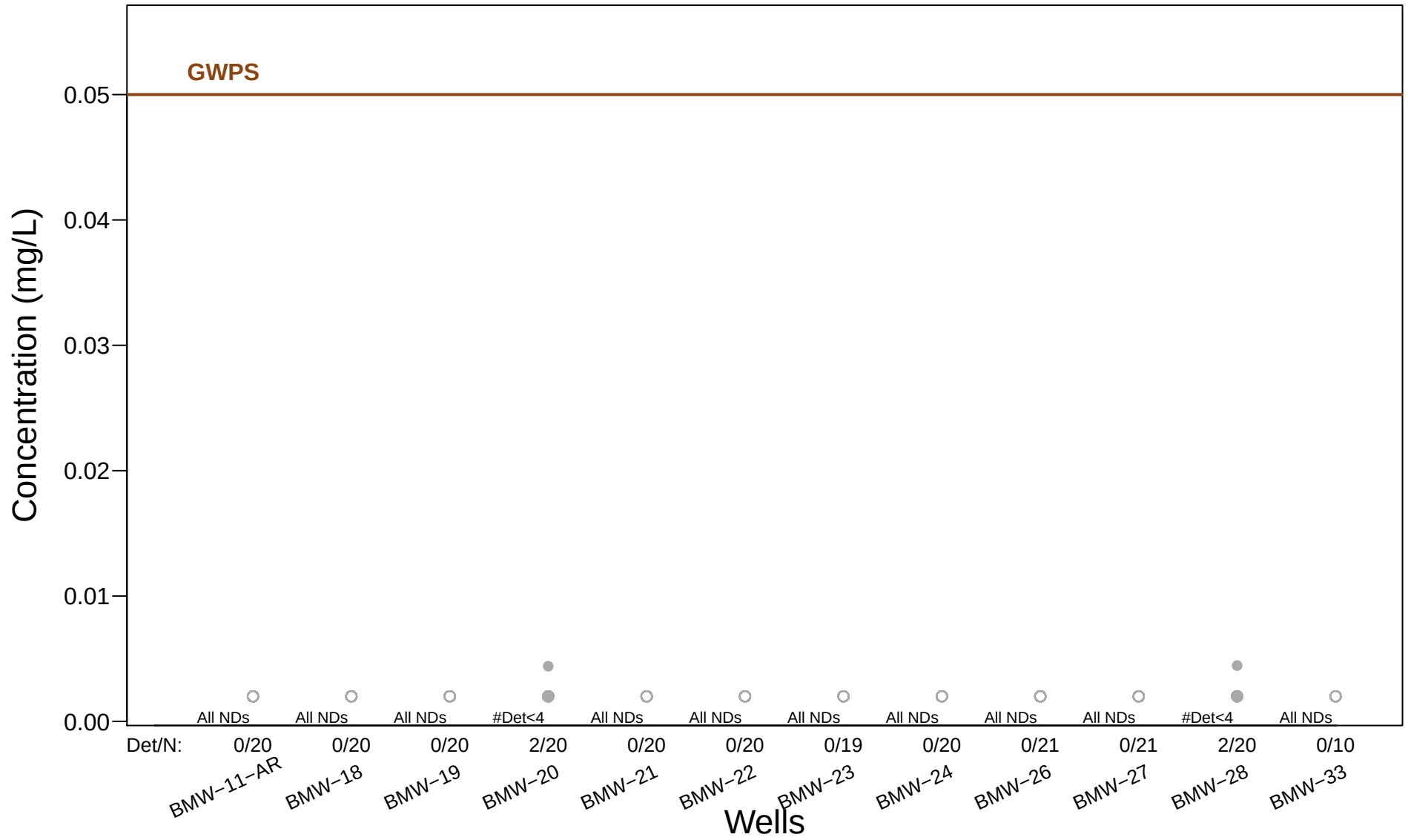
Lithium – 95% Confidence Intervals



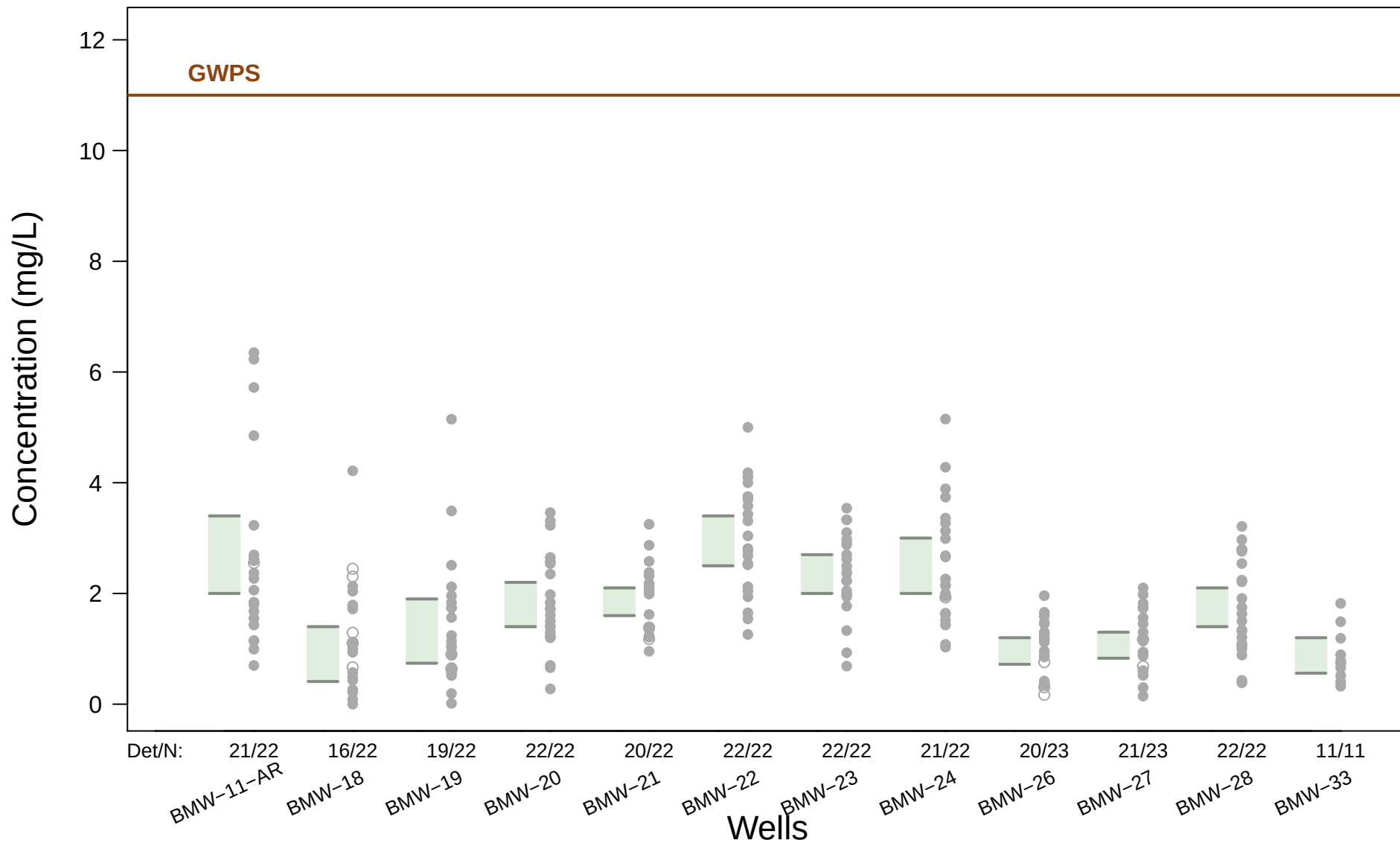
Molybdenum – 95% Confidence Intervals



Selenium – 95% Confidence Intervals



Radium-226/228 combined – 95% Confidence Intervals



Statistical Data Summary Table

STATISTICAL DATA SUMMARY TABLE

Site	Area	Analyte	Well	# Detects	# Samples	% Detects	Gradient	GWPS	Minimum Detect	Maximum Detect	Distribution	LCL	UCL	LCL > GWPS?
MLSES	A1 Area Landfill	Antimony	BMW-11-AR	0	19	0	Upgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-18	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-19	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-20	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-21	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-22	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-23	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-24	0	19	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-26	0	20	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-27	0	20	0	Downgradient Wells	0.006	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Antimony	BMW-28	5	19	26	Downgradient Wells	0.006	0.00101	0.00121	Nonparametric, <50% Detec	0.00087	0.00091	FALSE
MLSES	A1 Area Landfill	Antimony	BMW-33	1	9	11	Upgradient Wells	0.006	0.00102	0.00102	Nonparametric, det<4			
MLSES	A1 Area Landfill	Arsenic	BMW-11-AR	17	22	77	Upgradient Wells	0.016	0.00208	0.0116	Normal	0.0027	0.0056	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-18	0	22	0	Downgradient Wells	0.016	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Arsenic	BMW-19	8	22	36	Downgradient Wells	0.016	0.00217	0.0428	Nonparametric, <50% Detec	0.0012	0.0077	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-20	20	22	91	Downgradient Wells	0.016	0.00234	0.0126	Normal	0.0041	0.0068	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-21	22	22	100	Downgradient Wells	0.016	0.00217	0.00814	Nonparametric	0.0035	0.0041	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-22	4	22	18	Downgradient Wells	0.016	0.00206	0.00232	Nonparametric, <50% Detec	0.002	0.002	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-23	1	22	5	Downgradient Wells	0.016	0.0024	0.0024	Nonparametric, det<4			
MLSES	A1 Area Landfill	Arsenic	BMW-24	11	22	50	Downgradient Wells	0.016	0.00207	0.00579	Normal	0.00031	0.0031	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-26	12	23	52	Downgradient Wells	0.016	0.00316	0.0328	Gamma	0.0034	0.014	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-27	11	23	48	Downgradient Wells	0.016	0.00223	0.00845	Nonparametric, <50% Detec	0.003	0.0041	FALSE
MLSES	A1 Area Landfill	Arsenic	BMW-28	2	22	9	Downgradient Wells	0.016	0.00253	0.0057	Nonparametric, det<4			
MLSES	A1 Area Landfill	Arsenic	BMW-33	1	12	8	Upgradient Wells	0.016	0.00247	0.00247	Nonparametric, det<4			
MLSES	A1 Area Landfill	Barium	BMW-11-AR	22	22	100	Upgradient Wells	2	0.0393	0.0929	Normal	0.055	0.068	FALSE
MLSES	A1 Area Landfill	Barium	BMW-18	22	22	100	Downgradient Wells	2	0.0168	0.0446	Normal	0.03	0.036	FALSE
MLSES	A1 Area Landfill	Barium	BMW-19	22	22	100	Downgradient Wells	2	0.0104	0.0243	Normal	0.013	0.017	FALSE
MLSES	A1 Area Landfill	Barium	BMW-20	22	22	100	Downgradient Wells	2	0.0258	0.0989	Gamma	0.043	0.063	FALSE
MLSES	A1 Area Landfill	Barium	BMW-21	22	22	100	Downgradient Wells	2	0.0381	0.0703	Lognormal	0.041	0.046	FALSE
MLSES	A1 Area Landfill	Barium	BMW-22	22	22	100	Downgradient Wells	2	0.0576	0.106	Nonparametric	0.062	0.068	FALSE
MLSES	A1 Area Landfill	Barium	BMW-23	22	22	100	Downgradient Wells	2	0.0367	0.0519	Normal	0.041	0.044	FALSE
MLSES	A1 Area Landfill	Barium	BMW-24	22	22	100	Downgradient Wells	2	0.176	2.19	Nonparametric	0.24	1.6	FALSE
MLSES	A1 Area Landfill	Barium	BMW-26	23	23	100	Downgradient Wells	2	0.00892	0.0731	Normal	0.025	0.039	FALSE
MLSES	A1 Area Landfill	Barium	BMW-27	23	23	100	Downgradient Wells	2	0.00644	0.32	Nonparametric	0.025	0.034	FALSE
MLSES	A1 Area Landfill	Barium	BMW-28	22	22	100	Downgradient Wells	2	0.00461	0.0734	Nonparametric	0.011	0.047	FALSE
MLSES	A1 Area Landfill	Barium	BMW-33	11	11	100	Upgradient Wells	2	0.0759	0.285	Normal	0.099	0.18	FALSE
MLSES	A1 Area Landfill	Beryllium	BMW-11-AR	0	20	0	Upgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-18	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-19	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-20	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-21	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-22	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-23	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--

STATISTICAL DATA SUMMARY TABLE

Site	Area	Analyte	Well	# Detects	# Samples	% Detects	Gradient	GWPS	Minimum Detect	Maximum Detect	Distribution	LCL	UCL	LCL > GWPS?
MLSES	A1 Area Landfill	Beryllium	BMW-24	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-26	0	21	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-27	0	21	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-28	0	20	0	Downgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Beryllium	BMW-33	0	10	0	Upgradient Wells	0.004	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-11-AR	0	20	0	Upgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-18	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-19	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-20	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-21	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-22	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-23	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-24	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-26	1	21	5	Downgradient Wells	0.005	0.000823	0.000823	Nonparametric, det<4			
MLSES	A1 Area Landfill	Cadmium	BMW-27	6	21	29	Downgradient Wells	0.005	0.000521	0.00851	Nonparametric, <50% Detec	0.0001	0.0014	FALSE
MLSES	A1 Area Landfill	Cadmium	BMW-28	0	20	0	Downgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cadmium	BMW-33	0	10	0	Upgradient Wells	0.005	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-11-AR	1	21	5	Upgradient Wells	0.1	0.00295	0.00295	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-18	2	21	10	Downgradient Wells	0.1	0.00214	0.00944	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-19	1	21	5	Downgradient Wells	0.1	0.00267	0.00267	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-20	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-21	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-22	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-23	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-24	2	21	10	Downgradient Wells	0.1	0.0108	0.013	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-26	1	22	5	Downgradient Wells	0.1	0.00231	0.00231	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-27	3	22	14	Downgradient Wells	0.1	0.002	0.00278	Nonparametric, det<4			
MLSES	A1 Area Landfill	Chromium	BMW-28	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Chromium	BMW-33	0	10	0	Upgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cobalt	BMW-11-AR	2	22	9	Upgradient Wells	0.012	0.00486	0.0124	Nonparametric, det<4			
MLSES	A1 Area Landfill	Cobalt	BMW-18	1	22	5	Downgradient Wells	0.012	0.0129	0.0129	Nonparametric, det<4			
MLSES	A1 Area Landfill	Cobalt	BMW-19	15	22	68	Downgradient Wells	0.012	0.00355	0.0187	Normal	0.004	0.011	FALSE
MLSES	A1 Area Landfill	Cobalt	BMW-20	22	22	100	Downgradient Wells	0.012	0.003	0.108	Normal	0.047	0.075	TRUE
MLSES	A1 Area Landfill	Cobalt	BMW-21	0	22	0	Downgradient Wells	0.012	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cobalt	BMW-22	0	22	0	Downgradient Wells	0.012	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cobalt	BMW-23	0	22	0	Downgradient Wells	0.012	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Cobalt	BMW-24	14	22	64	Downgradient Wells	0.012	0.000643	0.0238	Normal	0.000025	0.0088	FALSE
MLSES	A1 Area Landfill	Cobalt	BMW-26	2	23	9	Downgradient Wells	0.012	0.00402	0.236	Nonparametric, det<4			
MLSES	A1 Area Landfill	Cobalt	BMW-27	7	23	30	Downgradient Wells	0.012	0.15	0.255	Nonparametric, <50% Detec	0.055	0.072	TRUE
MLSES	A1 Area Landfill	Cobalt	BMW-28	2	22	9	Downgradient Wells	0.012	0.0084	0.0115	Nonparametric, det<4			
MLSES	A1 Area Landfill	Cobalt	BMW-33	11	12	92	Upgradient Wells	0.012	0.00394	0.0176	Normal	0.0049	0.011	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-11-AR	10	22	45	Upgradient Wells	4	0.123	0.408	Nonparametric, <50% Detec	0.14	0.19	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-18	21	22	95	Downgradient Wells	4	0.101	0.477	Gamma	0.16	0.23	FALSE

STATISTICAL DATA SUMMARY TABLE

Site	Area	Analyte	Well	# Detects	# Samples	% Detects	Gradient	GWPS	Minimum Detect	Maximum Detect	Distribution	LCL	UCL	LCL > GWPS?
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-19	3	22	14	Downgradient Wells	4	0.127	0.404	Nonparametric, det<4			
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-20	5	22	23	Downgradient Wells	4	0.109	0.418	Nonparametric, <50% Detected	0.095	0.14	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-21	4	22	18	Downgradient Wells	4	0.126	0.366	Nonparametric, <50% Detected	0.1	0.14	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-22	5	22	23	Downgradient Wells	4	0.126	0.351	Nonparametric, <50% Detected	0.11	0.15	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-23	4	22	18	Downgradient Wells	4	0.122	0.302	Nonparametric, <50% Detected	0.11	0.13	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-24	22	22	100	Downgradient Wells	4	0.104	0.769	Normal	0.24	0.41	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-26	2	23	9	Downgradient Wells	4	0.106	0.344	Nonparametric, det<4			
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-27	8	23	35	Downgradient Wells	4	0.252	1.61	Nonparametric, <50% Detected	0.24	0.41	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-28	11	22	50	Downgradient Wells	4	0.104	0.529	Normal	-0.069	0.19	FALSE
MLSES	A1 Area Landfill	Fluoride (Appendix IV)	BMW-33	6	12	50	Upgradient Wells	4	0.145	0.41	Normal	-0.09	0.21	FALSE
MLSES	A1 Area Landfill	Lead	BMW-11-AR	6	21	29	Upgradient Wells	0.015	0.000362	0.00347	Nonparametric, <50% Detected	0.00039	0.00087	FALSE
MLSES	A1 Area Landfill	Lead	BMW-18	1	21	5	Downgradient Wells	0.015	0.0013	0.0013	Nonparametric, det<4			
MLSES	A1 Area Landfill	Lead	BMW-19	1	21	5	Downgradient Wells	0.015	0.00183	0.00183	Nonparametric, det<4			
MLSES	A1 Area Landfill	Lead	BMW-20	13	21	62	Downgradient Wells	0.015	0.000304	0.00159	Normal	0.00014	0.00065	FALSE
MLSES	A1 Area Landfill	Lead	BMW-21	0	21	0	Downgradient Wells	0.015	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Lead	BMW-22	0	21	0	Downgradient Wells	0.015	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Lead	BMW-23	0	21	0	Downgradient Wells	0.015	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Lead	BMW-24	0	21	0	Downgradient Wells	0.015	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Lead	BMW-26	4	22	18	Downgradient Wells	0.015	0.000594	0.00152	Nonparametric, <50% Detected	0.00034	0.00047	FALSE
MLSES	A1 Area Landfill	Lead	BMW-27	6	22	27	Downgradient Wells	0.015	0.0003	0.00097	Nonparametric, <50% Detected	0.00031	0.00042	FALSE
MLSES	A1 Area Landfill	Lead	BMW-28	4	21	19	Downgradient Wells	0.015	0.000393	0.00122	Nonparametric, <50% Detected	0.00032	0.00045	FALSE
MLSES	A1 Area Landfill	Lead	BMW-33	0	10	0	Upgradient Wells	0.015	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Lithium	BMW-11-AR	22	22	100	Upgradient Wells	0.1	0.0139	0.0686	Normal	0.028	0.041	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-18	22	22	100	Downgradient Wells	0.1	0.0122	0.14	Nonparametric	0.014	0.016	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-19	22	22	100	Downgradient Wells	0.1	0.0252	0.085	Normal	0.06	0.072	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-20	6	22	27	Downgradient Wells	0.1	0.00549	0.0742	Nonparametric, <50% Detected	0.0048	0.017	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-21	22	22	100	Downgradient Wells	0.1	0.0527	0.0739	Normal	0.063	0.067	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-22	22	22	100	Downgradient Wells	0.1	0.0594	0.089	Nonparametric	0.078	0.085	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-23	22	22	100	Downgradient Wells	0.1	0.077	0.106	Normal	0.086	0.092	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-24	20	22	91	Downgradient Wells	0.1	0.00545	0.054	Nonparametric	0.017	0.033	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-26	22	23	96	Downgradient Wells	0.1	0.0052	0.119	Nonparametric	0.081	0.1	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-27	22	23	96	Downgradient Wells	0.1	0.0471	0.113	Nonparametric	0.062	0.083	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-28	21	22	95	Downgradient Wells	0.1	0.00514	0.133	Nonparametric	0.063	0.1	FALSE
MLSES	A1 Area Landfill	Lithium	BMW-33	12	12	100	Upgradient Wells	0.1	0.0119	0.0206	Nonparametric	0.012	0.014	FALSE
MLSES	A1 Area Landfill	Mercury	BMW-11-AR	0	19	0	Upgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-18	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-19	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-20	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-21	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-22	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-23	0	18	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-24	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-26	0	20	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--

STATISTICAL DATA SUMMARY TABLE

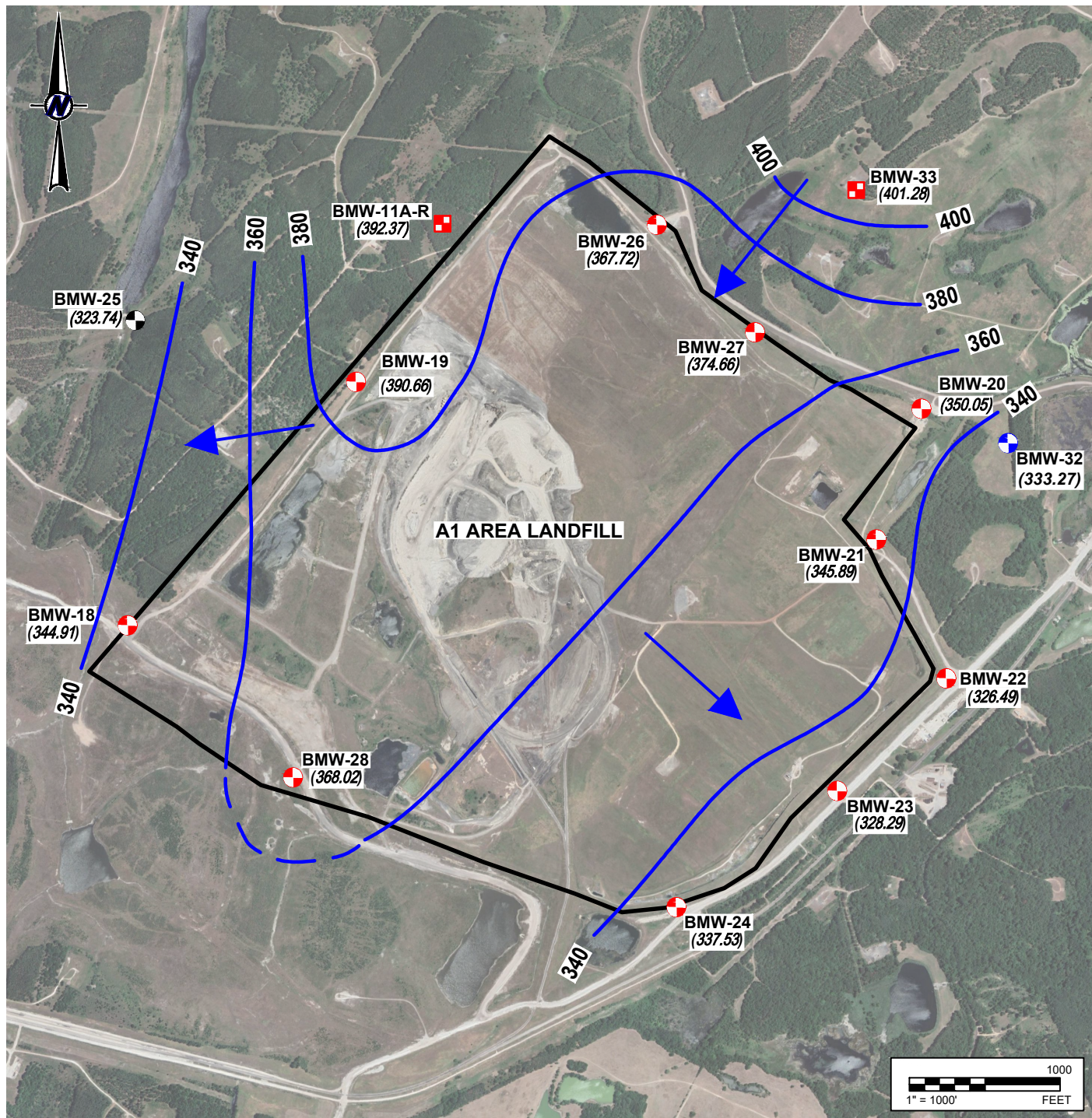
Site	Area	Analyte	Well	# Detects	# Samples	% Detects	Gradient	GWPS	Minimum Detect	Maximum Detect	Distribution	LCL	UCL	LCL > GWPS?
MLSES	A1 Area Landfill	Mercury	BMW-27	0	20	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-28	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Mercury	BMW-33	0	9	0	Upgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-11-AR	17	21	81	Upgradient Wells	0.1	0.00212	0.00597	Normal	0.0022	0.0034	FALSE
MLSES	A1 Area Landfill	Molybdenum	BMW-18	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-19	1	21	5	Downgradient Wells	0.1	0.00231	0.00231	Nonparametric, det<4			
MLSES	A1 Area Landfill	Molybdenum	BMW-20	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-21	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-22	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-23	0	20	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-24	0	21	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-26	8	22	36	Downgradient Wells	0.1	0.00215	0.00461	Nonparametric, <50% Detec	0.0022	0.0026	FALSE
MLSES	A1 Area Landfill	Molybdenum	BMW-27	0	22	0	Downgradient Wells	0.1	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Molybdenum	BMW-28	16	21	76	Downgradient Wells	0.1	0.00302	0.0124	Normal	0.0037	0.0074	FALSE
MLSES	A1 Area Landfill	Molybdenum	BMW-33	2	10	20	Upgradient Wells	0.1	0.00207	0.00325	Nonparametric, det<4			
MLSES	A1 Area Landfill	Selenium	BMW-11-AR	0	20	0	Upgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-18	0	20	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-19	0	20	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-20	2	20	10	Downgradient Wells	0.05	0.00204	0.0044	Nonparametric, det<4			
MLSES	A1 Area Landfill	Selenium	BMW-21	0	20	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-22	0	20	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-23	0	19	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-24	0	20	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-26	0	21	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-27	0	21	0	Downgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Selenium	BMW-28	2	20	10	Downgradient Wells	0.05	0.00208	0.00445	Nonparametric, det<4			
MLSES	A1 Area Landfill	Selenium	BMW-33	0	10	0	Upgradient Wells	0.05	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-11-AR	0	19	0	Upgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-18	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-19	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-20	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-21	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-22	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-23	0	18	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-24	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-26	0	20	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-27	0	20	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-28	0	19	0	Downgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Thallium	BMW-33	0	9	0	Upgradient Wells	0.002	ND	ND	All NDs	--	--	--
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-11-AR	21	22	95	Upgradient Wells	11	0.699	6.35	Gamma	2	3.4	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-18	16	22	73	Downgradient Wells	11	1E-99	4.214	Normal	0.41	1.4	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-19	19	22	86	Downgradient Wells	11	0.0156	5.147	Normal	0.74	1.9	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-20	22	22	100	Downgradient Wells	11	0.276	3.46	Normal	1.4	2.2	FALSE

STATISTICAL DATA SUMMARY TABLE

Site	Area	Analyte	Well	# Detects	# Samples	% Detects	Gradient	GWPS	Minimum Detect	Maximum Detect	Distribution	LCL	UCL	LCL > GWPS?
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-21	20	22	91	Downgradient Wells	11	0.955	3.25	Normal	1.6	2.1	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-22	22	22	100	Downgradient Wells	11	1.26	5	Normal	2.5	3.4	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-23	22	22	100	Downgradient Wells	11	0.687	3.54	Normal	2	2.7	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-24	21	22	95	Downgradient Wells	11	1.03	5.15	Normal	2	3	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-26	20	23	87	Downgradient Wells	11	0.337	1.96	Normal	0.72	1.2	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-27	21	23	91	Downgradient Wells	11	0.147	2.1	Normal	0.83	1.3	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-28	22	22	100	Downgradient Wells	11	0.387	3.21	Normal	1.4	2.1	FALSE
MLSES	A1 Area Landfill	Radium-226/228 combin	BMW-33	11	11	100	Upgradient Wells	11	0.324	1.82	Normal	0.56	1.2	FALSE

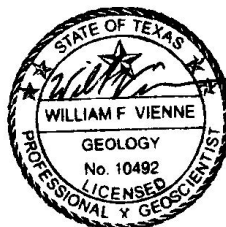
APPENDIX C

GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

-  DOWNGRADIENT CCR MONITORING WELL
-  UPGRADIENT CCR MONITORING WELL
-  CCR DELINEATION MONITORING WELL
-  NON-CCR MONITORING WELL
-  (358.02) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
-  340 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 20 FT)
-  INFERRED GROUNDWATER FLOW DIRECTION



01/31/2025

REFERENCE(S)

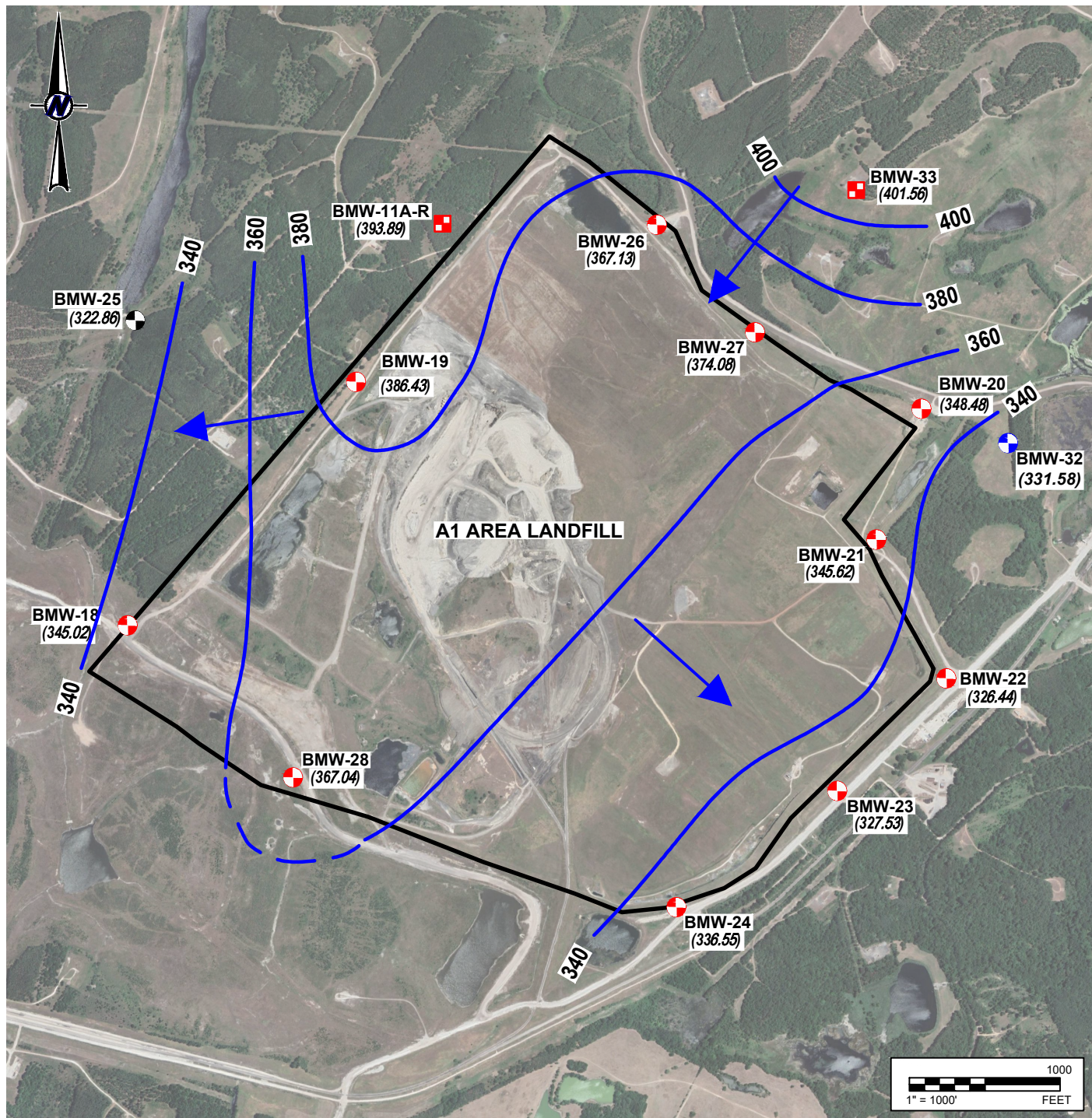
BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATE JANUARY 2021

LUMINANT
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

A1 AREA LANDFILL
POTENTIOMETRIC SURFACE MAP
MAY 23, 2024

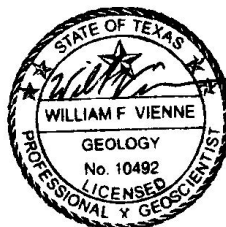
PROJECT: 23643.03 BY: SLB DATE: 7/22/2024 CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127



LEGEND

-  DOWNGRADIENT CCR MONITORING WELL
-  UPGRADIENT CCR MONITORING WELL
-  CCR MONITORING WELL
-  ACM DELINEATION MONITORING WELL
-  (358.02) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
-  340 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 20 FT)
-  INFERRED GROUNDWATER FLOW DIRECTION



01/31/2025

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATE JANUARY 2021

LUMINANT MARTIN LAKE STEAM ELECTRIC STATION TATUM, TEXAS

A1 AREA LANDFILL POTENTIOMETRIC SURFACE MAP AUGUST 7, 2024

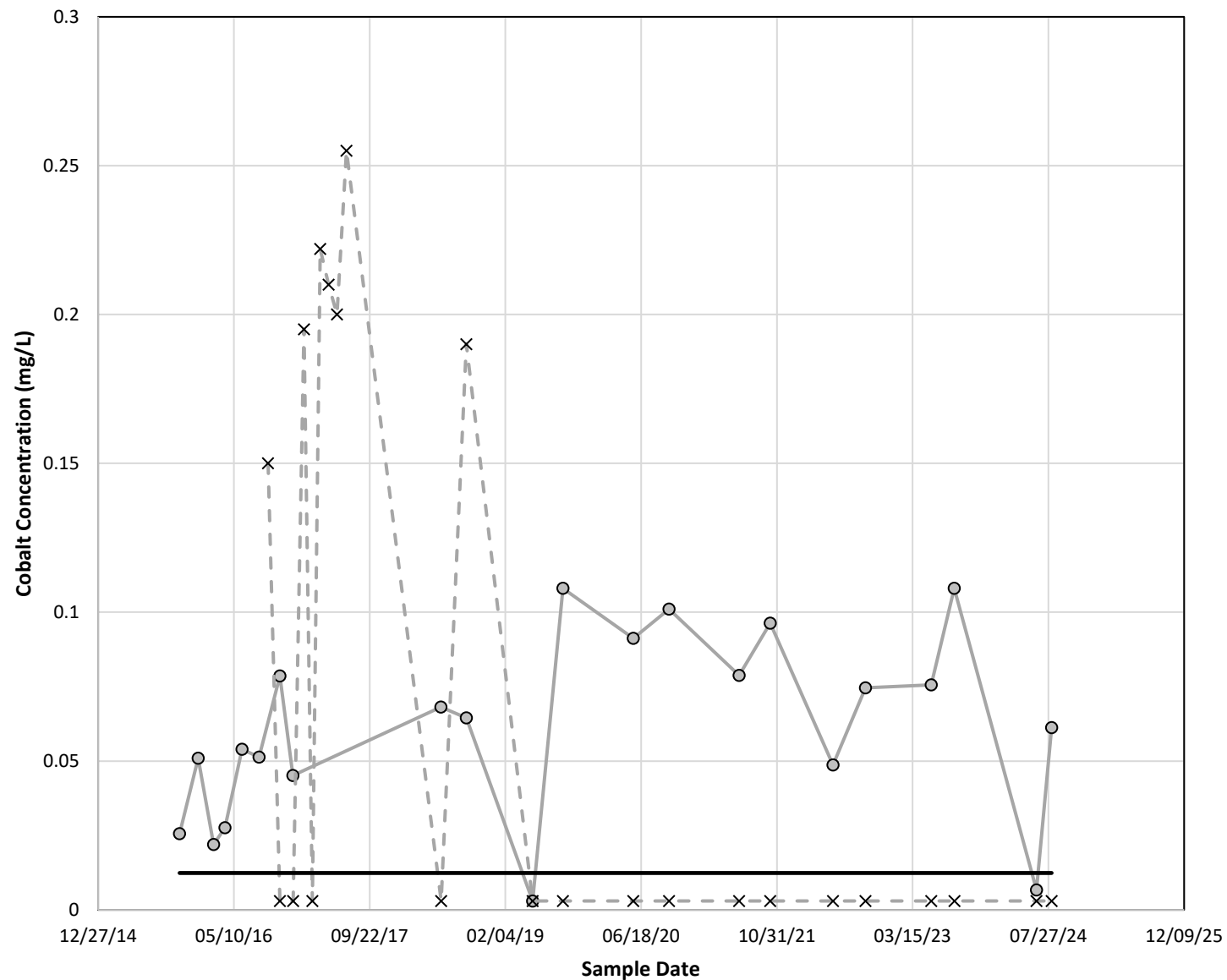
PROJECT: 23643.03 BY: SLB DATE: 12/19/2024 CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

APPENDIX D

COBALT TIME SERIES PLOTS

COBALT TIME SERIES: MONITORING WELLS BMW-20 AND BMW-27*



Notes:

*Graph includes data for monitoring wells and constituents for which statistically significant levels (SSLs) over the groundwater protection standard (GWPS) have been observed.